

44884
102
COUNTY BOROUGH OF ST. HELENS



Annual Report

OF THE

Medical Officer of Health,

FOR THE YEAR 1929.

FRANK HAUXWELL, M.B., Ch.B., D.P.H.

Medical Officer of Health,
and School Medical Officer.

St. Helens :

WOOD, WESTWORTH & CO., LIMITED, PRINTERS AND STATIONERS,
HARDSHAW STREET.

1930.

COUNTY BOROUGH OF ST. HELENS



Annual Report
OF THE
Medical Officer of Health,
FOR THE YEAR 1929.

FRANK HAUXWELL, M.B., Ch.B., D.P.H.

Medical Officer of Health,
and School Medical Officer.

St. Helens :

WOOD, WESTWORTH & CO., LIMITED, PRINTERS AND STATIONERS,
HARDSHAW STREET.

—
1930.

INDEX.

	<i>Page</i>
GENERAL STATISTICS	5
STAFF	6
NATURAL AND SOCIAL CONDITIONS OF THE AREA	8
VITAL STATISTICS	11
INFECTIOUS DISEASES	22
LABORATORY WORK	32
TUBERCULOSIS	33
VENEREAL DISEASES	44
SUMMARY OF NURSING ARRANGEMENTS, HOSPITALS, AND OTHER INSTITUTIONS AVAILABLE FOR THE DISTRICT	44
MATERNITY AND CHILD WELFARE	49
WELFARE OF THE BLIND	62
LIST OF ADOPTIVE AND LOCAL ACTS, BYELAWS AND LOCAL REGULA- TIONS AND ORDERS RELATING TO PUBLIC HEALTH, IN FORCE IN THE DISTRICT	64
INSPECTION AND SUPERVISION OF FOOD	67
SANITARY CIRCUMSTANCES OF THE AREA	82
HOUSING	94

TO THE MAYOR, ALDERMEN AND COUNCILLORS
OF THE COUNTY BOROUGH OF ST. HELENS.

Mr. Mayor, Ladies and Gentlemen,

I have the honour to submit the 57th Annual Report on the health of the Borough for the year ended the 31st December, 1929.

According to the estimate of the Registrar General the mid-year population of the borough was 109,200, being a decrease of 1,300 from the mid-year estimate of 1928. I am of opinion that the present estimate is now too low. The census of 1921 showed a population in the borough of 102,640 on the night of the census and this was later adjusted by the Registrar General to 104,900 on the grounds that on that night many persons from industrial areas were on holiday ; and during the eight years since the census to mid-year, 1929, there has been an excess of births over deaths of approximately 9,922. This question will, however, be definitely settled by the census of 1931.

The reduction in the estimated mid-year population has necessarily increased the birth and many mortality rates which are based upon it, so that these rates are to some extent higher than they would have been if based on an increasing and not a decreasing population.

The birth rate for 1929 was 20·7 per 1,000 of the estimated population and the death rate 14·6 per 1,000. The corresponding figures for England and Wales were 16·3 and 13·4. Apart from any increase due to the necessity of calculating on a decreased population in 1929, there has been a distinct increase in mortality in St. Helens during the year. This occurred in the first quarter of the year, when the death rate rose to 23·7 per 1,000 as compared with 13·7 in the corresponding quarter in 1928. This

was mainly due to the short but severe epidemic of influenza together with the severe weather during that period. During the other three quarters of the year the death rate was lower than in the corresponding quarters of the preceding year.

There has also been a distinct increase in the infant mortality from 98·5 per 1,000 births in 1928 to 113·8 per 1,000 in 1929. This again was associated with the influenza epidemic and the severe weather during the first few months of the year.

The severe epidemic of scarlet fever which commenced during 1928 persisted into the first half of 1929, but on the whole the type remained mild.

For details regarding the various conditions dealt with and the numerous activities of the Health Department I would refer to the appropriate sections of the Report. I would especially draw attention to those sections dealing with Food and the Sanitary Condition of the Borough, as special attention has been paid to these during the year.

I take this opportunity of thanking members of the Council for the kindness and consideration shown to me in the conduct of my work, and I have to record my hearty appreciation of the loyal and willing co-operation of all members of my Staff.

I have the honour to be,

Your obedient Servant,

FRANK HAUXWELL

September, 1930,

GENERAL STATISTICS.

Area (Acres)	7,284
Population (Census, 1921)	102,640
Estimated Population mid-year 1929	109,200
*Number of structurally separate sets of premises intended or used for habitation	
	18,516
*Number of families or separate occupiers	19,688
Assessable Value	£477,206
Product of a penny rate	£1,860

* From Census, 1921.

The Net Cost on the Rates of the various Health Services in St. Helens during the year ending 31st March, 1930, as compared with the previous year was as follows :—

	Pence per £.	
	1928-29	1929-30
Isolation Hospital	4·545	3·778
Tuberculosis	2·697	2·738
Maternity and Child Welfare	3·026	2·824
Venereal Diseases	·067	·112
Blind Persons	·569	1·160
Food and Drugs Acts	·101	·157
Slaughterhouse and Cold Stores	·028	·134
Contagious Diseases of Animals.....	·062	·060
General Sanitary and Administrative Charges	4·518	4·610
Sewage Disposal	2·772	2·629
*Collection and Disposal of Refuse	*9·949	*13·089
Public Conveniences	·227	·309

Total Net Cost of Health Services...28·561d. 31·600d.

Total Net Cost of Health Services
shown as a proportion of the

Total Rates	14·0%	15·5%
Total Rate per £	17/-	17/-
	(204d.)	(204d.)

* This service is under the control of the Cleansing and Transport Committee.

STAFF.

Medical Officer of Health, Administrative Tuberculosis Officer,
Medical Superintendent of Corporation Hospitals, and School
Medical Officer :

*Frank Hauxwell, M.B., Ch.B. (Glasgow), D.P.H. (Camb).

Deputy Medical Officer of Health :

*D. E. Morley, M.D., B.S., M.R.C.S., L.R.C.P., D.P.H.
(resigned 31st March, 1929).

*J. A. Fraser, M.B., Ch.B., D.P.H. (Edinburgh) from
(from 1st April, 1929).

Assistant Medical Officers of Health :

*J. M. Tyrrell, M.B., Ch.B., D.P.H. (Edin.) (resigned 14th
September, 1929).

*W. H. Brown, M.B., Ch.B. (Glasgow), D.P.H. (Liverpool),
(from 1st January, 1930).

*Helen Standring, M.D., Ch.B., D.P.H. (Liverpool).

*T K. Hughes, M.B., Ch.B., D.P.H. (Liverpool) (resigned
31st May, 1929).

*R. W. Eldridge, M.D., Ch.B., M.R.C.S., L.R.C.P., B.Sc.,
D.P.H. (from 1st August, 1929).

Dental Surgeons :

- *A. G. Batten, L.D.S. (from 2nd September, 1929).
- *F. A. Hely, L.D.S. (resigned 30th April, 1929).
- *A. C. Wilson, L.D.S. (resigned 31st October, 1929).
- *L. A. Jones, L.D.S. (from December, 1929).
- *Christine B. Calder, L.D.S. (resigned 31st October, 1929).
- *Annie M. Kean, L.D.S. (from 4th November, 1929).

Sanitary Inspectors, etc. :

- *Alfred Wade, M.R.San.I (1), (5), (8)
Chief Sanitary Inspector.
(resigned 31st May, 1929).
- *Ernest Sefton, (1), (5), (10), (11).
Chief Sanitary Inspector
(from 15th July, 1929).
- H. Brown (1), (4), (5), (6).....Sanitary Inspector.
- H. Lowe (4), (6).....do.
- J. Skeath (4)do
- W. J. Milligan (1).....Conversions Inspector.
(retired 1st December, 1929).
- T. Blashill (1), (5).....Superintendent of Public Abattoir.

Matron of Corporation Hospitals :

- *Edith Carder.

*Health Visitors and School Nurses :

Ethel Denman,	(1), (2), (3), (7)	Mary Corrish,	(3), (7)
Mary Riding	(3), (7)	Rosanna J. O'Connor	(3), (7)
Winifred Cowan	(2), (3), (7)	Alice Happold,	(3), (7)
Amy Coates,	(2), (3), (7)	Mary Elliott,	(3), (7)
Louisa M. Austin,	(3), (7)	Edith Curran	(3), (7)
Emily Corrish,	(2), (3), (7)	†Muriel Mountford	(3), (7)
Daisy C. Cruickshank,	(3), (7)	McDonald, E. R.	(2), (3), (7)
Nora Hogan,	(3), (7)		

*After Care Sister (Orthopædic Scheme) :

- Olive I. Burton, (7), (9)

*Tuberculosis Nurse :

- †Mary Belsher (3), (7)
- Grace Sumner (7)

*Clerk Dispenser and Venereal Disease Attendant :
Jas. McP. Hutton.

*Venereal Disease Nurse :
Florence Wilkinson (7)

- † Resigned during the year.
- (1) Sanitary Inspector's Certificate of the Royal Sanitary Institute.
 - (2) Health Visitor's Certificate of the Royal Sanitary Institute.
 - (3) Certificate of the Central Midwives Board.
 - (4) Sanitary Inspector's Certificate of the Liverpool University.
 - (5) Certificate for Meat Inspection of the Royal Sanitary Institute.
 - (6) Certificate for Meat Inspection of Liverpool University.
 - (7) A trained Nurse.
 - (8) Certificate for Sanitary Science of the Royal Sanitary Institute.
 - (9) Certificate of Chartered Society of Masseuses, etc.
 - (10) Diploma of the Institute of Sanitary Engineers.
 - (11) Diploma of the Building Surveyors' Association.

The following are part time officers :

*J. Unsworth, M.B., B.S., (Lond.).....	Physician to the X-ray Department, Tuberculosis Dispensary.
*T. P. McMurray, M.B, M.Ch., B.A.O. (R.U.I.), F.R.C.S. (Edin.).....	Orthopædic Surgeon.
H. E. Davies, M.A., B.Sc., F.I.C.	Public Analyst.
T. J. Kenny, M.R.C.V.S.	Veterinary Inspector.

* Officers towards whose salaries Exchequer contributions are received.

1.—NATURAL AND SOCIAL CONDITIONS OF THE AREA.

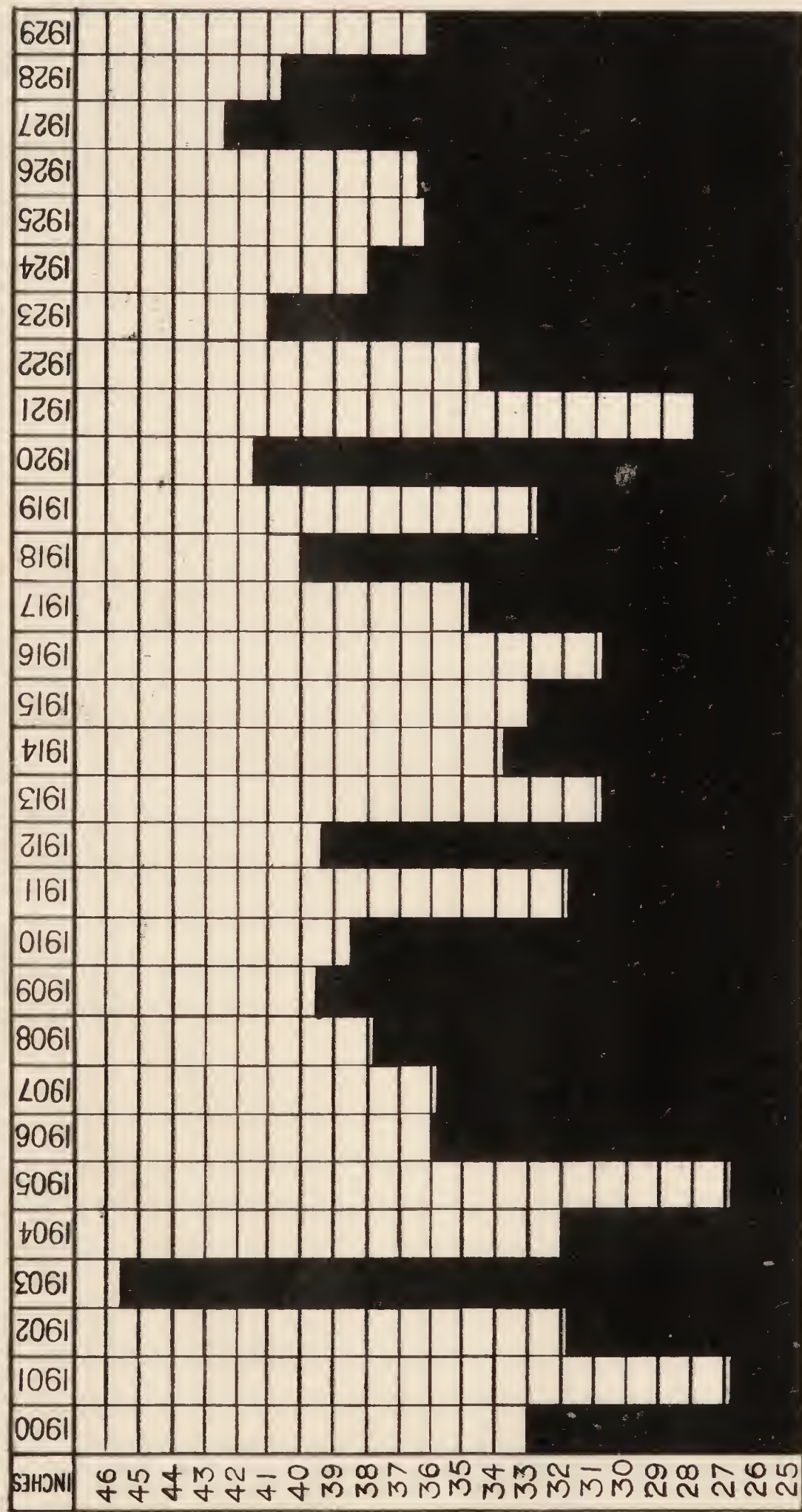
PHYSICAL FEATURES AND GENERAL CHARACTER.—

St. Helens is situated 10 miles east of Liverpool and 20 miles west of Manchester, and lies on the southern fringe of the Lancashire coal fields. The area of the borough is 7,284 acres of which approximately one-quarter only is occupied by factories and other industrial works.

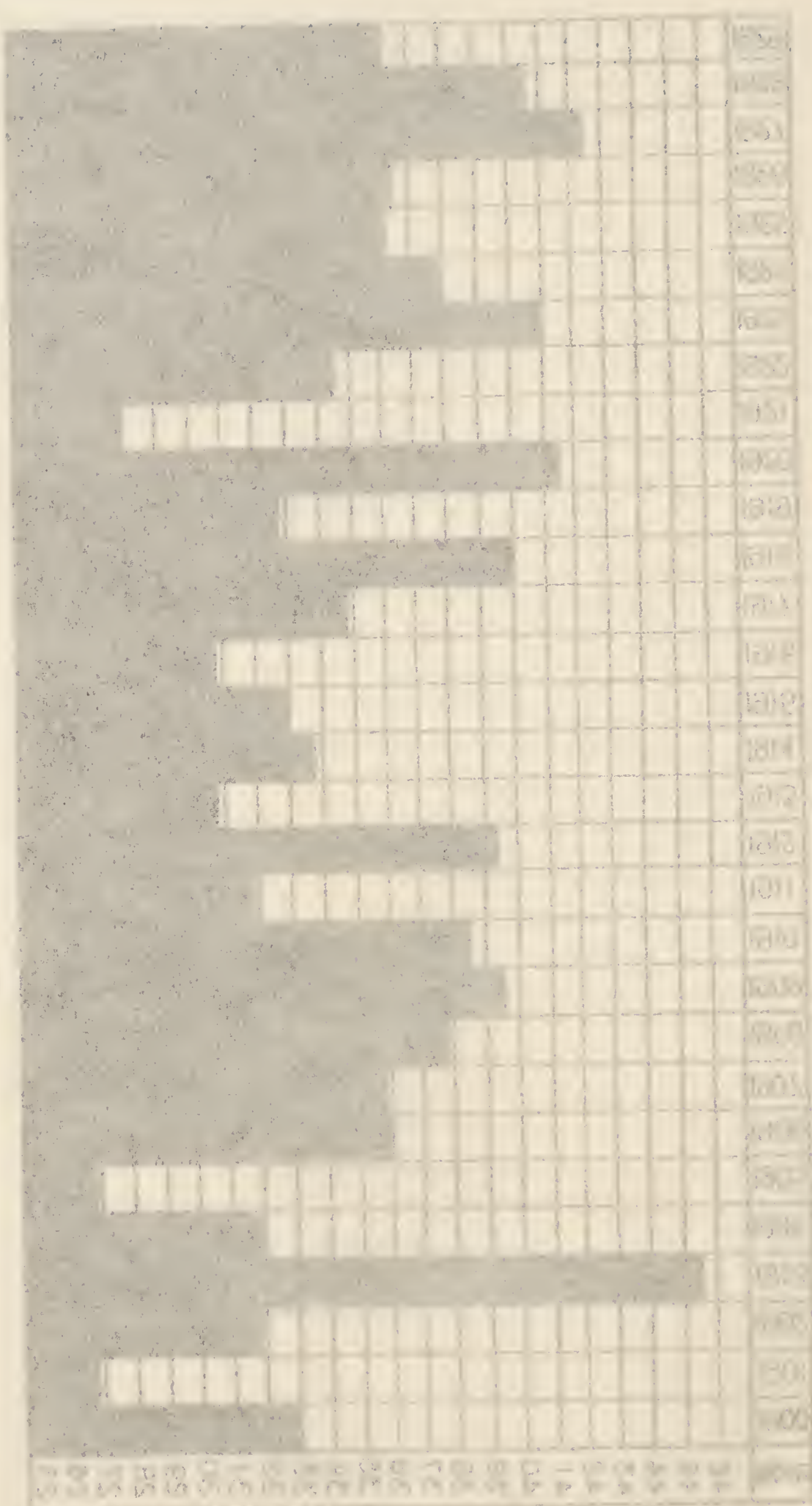
Geologically the soil consists of clay overlying coal measures, and owing to past mining activities some portions of the town are peculiarly susceptible to subsidence. This is particularly so in the Sutton and Derbyshire Hill districts.

Table 1.

TOTAL RAINFALL IN INCHES IN ST. HELENS SINCE 1900.



2001 ÉVREK ÉRTÉKESÍTÉSÉNEK ÉS SZAKKÖRÖK M. LEKÖVETÉSE



SOCIAL CONDITIONS.—The chief industries of the town are coal mining and glass making.

The average number of unemployed in St. Helens on the register of the Labour Bureau during 1929 (as shown by the figures taken on the first Monday in each month) was 3,134 men, 313 women, and 144 juveniles (total 3,591). The largest number of unemployed was 4,021 in January.

The total amount of domiciliary relief granted in St. Helens by the Board of Guardians during 1929 was £62,847/7/4, of which sum £29,557/2/1 was granted to unemployed men and their families. From St. Helens, 361 men, 125 women, and 98 children were admitted to the Poor Law Infirmary, and 196 men, 65 women, and 16 children were admitted to the "House" during the year.

Under the National Health Insurance Act, the total number of insured persons in St. Helens on 1st October, 1929, was 44,652 or approximately 40% of the total population.

METEOROLOGY.—The total rainfall for the year was 36·04 inches. The annual rainfall since 1900 is shown in Table 1. The highest temperature in the shade during the year was on the 17th July, when it reached 85·6°F. The lowest was 15·4°F on the 15th December. The prevailing wind during the year was N.W.

In addition to the daily readings at the Corporation Observatory in Victoria Park, a special deposit gauge is maintained in the centre of the town for the collection and measurement month by month of the amount of atmospheric pollution. This has shown the amount of total solids deposited in St. Helens during the year April, 1929 to March, 1930, to be 15,643 metric tons per 100 square kilometres or approximately 1,408 pounds per acre.

II.—VITAL STATISTICS.

EXTRACTS FROM VITAL STATISTICS OF THE YEAR :

	M.	F.	Total.
Births :—Legitimate	1097	1104	2201
Illegitimate	35	23	58
Totals	1132	1127	2259

Birth Rate ... 20·7.

Deaths :—Total	1599
Death-rate (R.G.)	14·6

Number of women dying in or in con-	from Sepsis	7
sequence of child birth ... 13	from other causes ...	6

Deaths of infants under one year of age :—

	M.	F.	Total.
Legitimate	126	125	251
Illegitimate	4	2	6
Totals	130	127	257

Infant Mortality ... 113·8

Deaths from Measles (all ages)	49
„ Whooping Cough (all ages)	13
„ Diarrhœa (under 2 years of age) ..	19
„ Tuberculosis	115
Zymotic Death Rate	0·91

Table 2 shows the main vital statistics of St. Helens in comparison with those of other County Boroughs in Lancashire as well as with those for all the County Boroughs of the Northern Counties and all the County Boroughs of England and Wales.

Table 2.

COUNTY BOROUGH	Estimated civil population	Birth Rate	Crude Death Rate	Infant Mortality	Maternal Mortality	Tuber- culosis Death Rate (all forms) per million population
		per 1,000 population		per 1,000 births		
All County Boroughs of England and Wales	13,281,820	17.0	14.4	86	4.4	1155
All County Boroughs of Northern Counties	7,006,410	17.4	15.1	96	4.8	1222
Barrow-in-Furness	65,940	17.4	12.5	82	2.6	743
Blackburn	125,300	12.4	14.9	80	9.6	1014
Blackpool	99,800	10.9	14.7	56	4.6	750
Bolton	181,500	14.2	15.4	102	8.5	798
Bootle	84,970	19.5	12.8	83	3.0	1271
Burnley	100,200	14.0	15.0	105	5.0	938
Bury	56,830	13.6	16.4	79	7.0	809
Liverpool	872,802	21.6	15.1	96	3.5	1460
Manchester	770,655	16.9	15.3	97	4.4	1407
Oldham	142,500	13.2	20.3	117	5.8	1108
Preston	126,100	15.6	12.7	104	6.1	880
Rochdale	90,900	14.2	16.7	77	9.3	850
ST. HELENS	109,200	20.7	14.6	114	5.8	1053
Salford	235,600	16.4	15.4	129	3.9	1324
Southport	80,040	11.1	12.1	73	4.4	675
Warrington	79,400	19.4	14.6	100	3.7	1300
Wigan	87,600	17.6	15.0	130	8.5	987

From this table it will be seen that of the 17 County Boroughs in Lancashire, St. Helens has the fifth lowest death rate, the eleventh lowest tuberculosis death rate and the tenth lowest rate of maternal mortality. It is, however, fourth highest in the rate of infant mortality. The birth rate is the second highest in the list.

Table 3 gives a summary of the vital statistics for the past 50 years.

POPULATION.—The Registrar General has again reduced the estimated mid-year population for 1929. According to his estimate the population of St. Helens at 30th June, 1929, was 109,200 as compared with his estimate of 110,500 for 1928 and 113,100 for 1927. I am still of opinion that this estimate is too low. During the years 1928 and 1929 there has been an excess of births over deaths

Table 3.

Statistics for St. Helens since 1880.

YEAR	Population	Birth Rate	Death Rate	Zymotic Death Rate	Infant Mortality Rate	Rate of Persons Married	DEATHS FROM							
							Small Pox	Measles	Scarlet Fever	Typhoid Fever	Typhus Fever	Diarrhoea	Whooping Cough	Diphtheria
1880	58,807	41.6	20.0	2.92	169	—	0	0	27	32	0	131	71	8
1881	57,575	43.5	21.6	2.03	128	—	0	14	27	45	0	76	3	22
1882	58,903	43.7	25.4	4.95	180	—	0	205	35	24	0	85	36	38
1883	60,263	40.69	21.65	2.5	143	—	0	3	14	31	0	69	24	11
1884	61,584	42.50	24.16	5.3	173	—	0	131	16	33	2	131	9	11
1885	62,932	39.93	23.32	3.5	168	—	0	81	13	7	1	56	53	11
1886	64,311	40.70	22.46	5.2	172	—	0	102	34	28	0	122	41	10
1887	65,718	37.00	21.69	3.9	163	—	0	53	35	34	0	101	28	11
1888	67,158	39.20	19.80	3.1	151	—	0	38	11	22	0	65	61	21
1889	68,628	39.86	23.50	4.18	177	—	0	78	3	81	1	85	15	29
1890	70,132	38.90	25.43	5.3	170	—	0	19	181	24	1	74	68	13
1891	71,509	40.80	26.02	3.0	180	—	0	54	24	26	0	78	29	9
1892	72,399	40.2	21.0	2.64	147	—	1	23	18	25	0	84	31	12
1893	73,576	41.3	24.4	5.4	196	—	5	135	6	52	0	168	19	16
1894	*76,112	37.8	18.3	2.21	161	14.6	0	21	14	26	2	38	61	10
1895	77,288	40.9	21.8	3.10	181	13.0	1	54	9	59	0	101	14	8
1896	78,482	38.7	20.9	3.73	177	13.2	0	38	59	40	0	63	78	17
1897	79,694	40.0	21.8	4.3	181	14.2	0	87	44	33	0	133	33	20
1898	80,926	40.3	19.9	3.2	172	14.2	0	17	24	30	0	140	34	16
1899	82,176	38.3	20.4	2.9	157	13.0	0	21	8	43	0	114	41	15
1900	83,445	37.1	22.8	3.2	188	13.0	0	59	25	19	0	91	56	19
1901	84,734	36.9	19.7	2.56	175	13.9	0	7	29	34	0	95	17	3
1902	86,043	37.4	19.7	2.60	167	11.4	0	59	52	25	0	50	18	20
1903	87,372	39.1	17.5	1.72	138	13.0	0	1	26	18	0	53	30	23
1904	88,722	37.4	20.9	3.96	174	12.9	3	131	17	13	0	120	49	22
1905	89,843	36.1	17.2	1.88	132	11.7	0	41	16	2	0	66	26	18
1906	91,153	33.9	17.3	1.79	159	11.9	0	10	4	18	0	105	5	22
1907	92,476	34.1	18.3	2.87	155	13.6	0	145	10	12	0	36	52	11
1908	93,812	35.2	16.0	1.32	122	12.3	0	0	29	12	0	59	7	17
1909	95,161	32.0	18.5	3.5	149	12.7	0	188	33	13	0	27	62	12
1910	96,523	32.7	14.5	1.26	121	13.1	1	15	22	10	0	51	16	7
1911	96,870	33.5	18.3	3.03	158	12.7	0	69	13	22	0	143	39	8
1912	98,159	32.0	15.5	1.76	124	14.0	0	62	19	8	0	49	46	19
1913	99,460	32.2	18.9	3.74	155	14.6	0	189	26	4	0	120	18	15
1914	100,775	33.3	17.1	1.62	138	14.1	0	25	5	4	0	98	24	8
1915†	92,240	32.1	19.3	3.1	129	16.1	0	126	12	6	0	78	40	32
1916†	90,000	26.5	16.8	1.95	108	14.9	0	2	30	2	0	64	34	85
1917†	90,600	22.0	16.5	2.26	123	10.6	0	65	20	2	0	37	19	79
1918†	90,600	24.1	21.2	2.45	126	11.4	0	26	24	0	0	48	24	100
1919†	100,805	25.5	15.0	0.82	117	17.5	0	5	9	2	0	35	7	25
1920	104,822	31.8	13.5	1.2	113	16.8	0	56	7	0	0	44	7	13
1921	104,900	29.1	12.6	0.83	103	17.2	0	7	5	0	0	63	24	5
1922	106,400	26.4	13.4	0.93	115	11.5	0	60	4	2	0	28	3	5
1923	107,100	24.4	11.9	0.39	91	12.8	0	0	4	1	0	24	10	8
1924	108,700	24.1	12.0	0.68	103	12.7	0	29	1	2	4	36	11	4
1925	109,600	23.9	12.0	0.85	100	12.0	0	17	7	3	0	35	33	6
1926	110,000	23.2	12.0	0.62	102	10.2	0	27	1	0	0	43	4	6
1927	113,100	20.8	11.4	0.82	88	11.5	0	60	2	0	0	26	5	7
1928	110,500	21.8	12.0	0.67	98	11.8	0	15	5	1	0	29	21	10
1929	109,200	20.7	14.6	0.91	114	13.0	0	49	6	1	0	23	13	11

† Estimated civil population.

* Borough extended.

to the extent of 1,737, whereas according to the Registrar General's estimate the population has decreased during approximately the same period by 3,900. There is, of course, the possibility, as suggested previously, that the estimate of population for 1927 was too high. The true figure will, however, be obtained at the census to be taken in 1931. Meanwhile, as the death rate, birth rate and similar vital statistics are based on the estimated mid-year population, it will be apparent that the reduced estimate for 1929 will make these rates higher than they would have been if based on the estimated population for the previous year.

The natural increase in population during 1929, i.e., the excess of the number of births over deaths was 660 ; the natural increase in 1928 was 1,077.

BIRTHS.—The number of births registered in St. Helens during 1929 was 2,252. 60 births occurring in other districts were transferable to St. Helens and 53 occurring in the borough were transferred to other districts, making a total of 2,259 births belonging to the borough. The birth rate for the year was 20·7 per 1,000 of the population, showing a decrease as compared with the figure of 21·8 per 1,000 for the previous year. The rate for England and Wales during 1929 was 16·3 and for the 107 County Boroughs and Great Towns 16·6 per 1,000.

The following table shows the birth rate and the marriage rate for St. Helens for 1929, in comparison with the rates for quinquennial periods during the last 30 years.

	Period.				Birth Rate	Marriage Rate
					per 1,000 of the population.	
1896-1900	37.0	13.5
1901-1905	33.5	12.7
1906-1910	37.3	13.5
1911-1915	32.5	14.3
1916-1920	25.9	14.2
1921-1925	25.5	13.2
1926	23.2	10.2
1927	20.8	11.5
1928	21.8	11.8
1929	20.7	13.0

In 1929, the male births numbered 1,132 and the female 1,127, being a proportion of 1,004 male to 1,000 female children born.

Table 4.
Number of illegitimate births.

Years	...	...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Number of illegitimate births			71	108	84	96	97	92	78	78	112	127	131	136	81	76	70	79	68	80	62	58
Proportion per 1,000 population		...	0.73	1.11	0.85	0.96	0.96	0.90	0.79	0.79	1.1	1.2	1.2	1.3	0.7	0.7	0.64	0.72	0.61	0.7	0.56	0.53

Table 5.
Number of marriages.

Years	...	...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	9 28	1929
Number of Marriages			637	617	691	730	706	745	568	536	579	924	882	903	612	686	692	661	565	653	653	710
Marriage rate per 1,000 population		...	13.1	12.7	14.09	14.6	14.01	14.5	11.58	10.60	11.4	17.5	16.8	17.2	11.5	12.8	12.7	12.0	10.2	11.5	11.8	13.0

Illegitimate births were 2·6% of the total, as compared with 2·6% in the previous year. Table 4 gives the illegitimate birth rate since 1910.

Table 6 shows the number of births notified in each ward during the year, and Table 7 shows the birth rate in St. Helens since 1880. The births and deaths in the local hospitals are allocated to the wards in which the usual places of residence are situated.

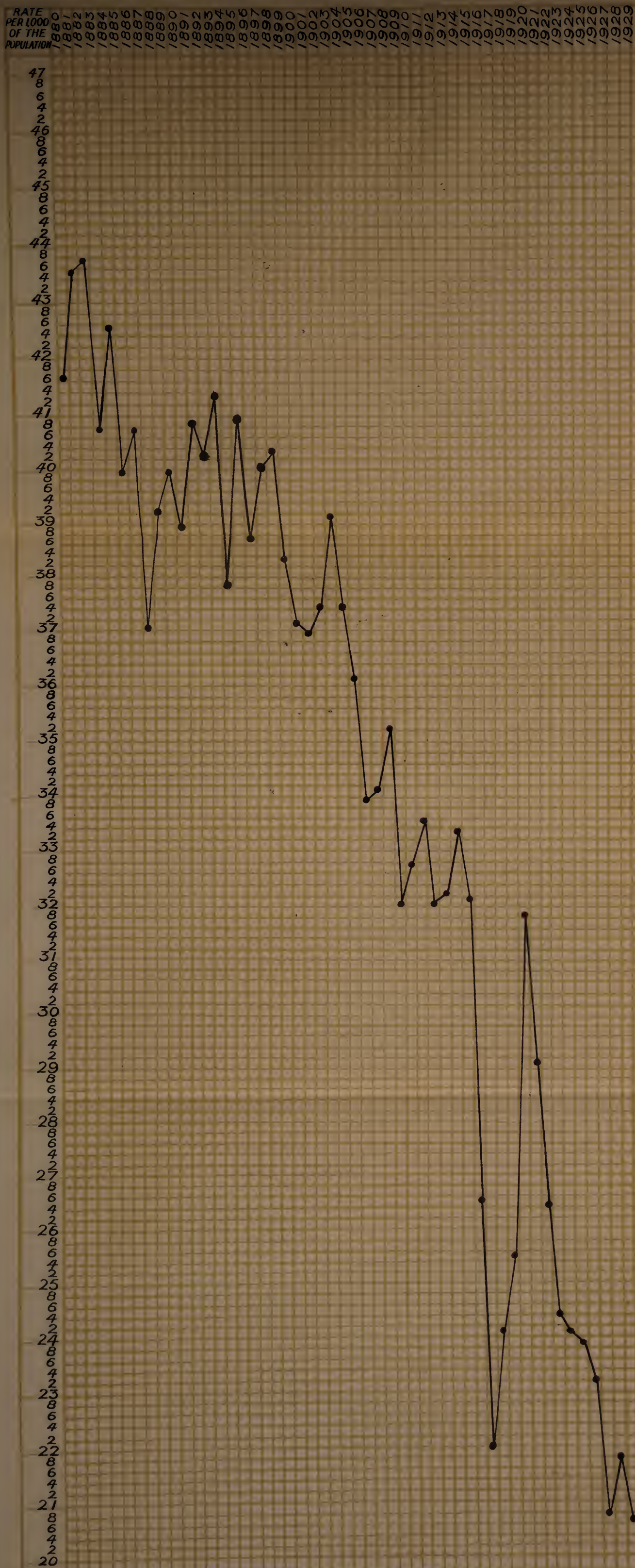
Table 6.

WARD	Number of births notified	Birth-rate per 1000 population	Number of deaths	Death-rate per 1000 population
Central	123	18.2	127	18.8
East Sutton	243	18.7	168	12.9
Hardshaw	166	13.6	174	13.7
North Eccleston	219	16.4	188	14.1
North Windle	303	21.9	223	16.1
Parr	450	33.1	240	17.6
South Eccleston	278	19.3	178	12.4
South Windle	165	19.4	138	16.2
West Sutton	294	22.5	163	12.5
Total	2241	20.5	1599	14.6
England and Wales ...	—	16.3	—	13.4
107 Great Towns	—	16.6	—	13.7

MARRIAGES.—The number of marriages during the year was 710, giving a rate of persons married of 13·0 per 1,000 of the population. Table 5 shows the rate for past years.

DEATHS.—The number of deaths occurring within the borough during the year was 1,501. This total includes 141 deaths in St. Helens of persons usually resident in other areas, but excludes 239 deaths of persons usually resident within the borough which occurred in other areas, so that the actual number of deaths assignable to St. Helens is 1,599. This gives a death rate of 14·6 per 1,000 of the population, compared with a death rate of 12 per 1,000 for 1928. The death rate for England and Wales for the year was 13·4 per 1,000.

TABLE 7.
BIRTH RATE - ST. HELENS, 1880-1929.



As already suggested, some part of the increased death rate is due to the further decrease in the estimated mid-year population upon which the death rate is calculated. There is no doubt, however, than there was an actual increase in the mortality during 1929. This was mainly due to the short but severe epidemic of influenza which occurred in the early part of the year, together with the severity of the weather about the same time. During the first quarter of the year the death rate rose from 13·7 per 1,000 of the population in 1928 to 23·7 per 1,000 in 1929, whereas the death rate for the other three quarters was less in 1929 than in the previous year. St. Helens does not appear to be alone in this increased mortality, as the death rate for all England and Wales rose from 11·7 per 1,000 in 1928 to 13·4 per 1,000 in 1929, and the death rate for all the County Boroughs of the Northern Counties rose from 12·9 in 1928 to 15·1 in 1929.

Apart from the death rate directly attributable to influenza (which rose from 33 per 100,000 of the population in 1928 to 134 per 100,000 in 1929), there was associated with it an increase in the death rate from pneumonia, bronchitis, and other respiratory diseases, the death rate from which rose from 221 per 100,000 of population in 1928 to 332 per 100,000 in 1929.

A comparison of the death rate in St. Helens during the past 50 years with the rate for England and Wales during the same period is seen in the following statement :—

Period.	Death Rate per 1,000 of the population.	
	St. Helens (crude).	England and Wales.
1881-85	23·2	19·4
1886-90	22·5	18·9
1891-95	21·8	18·7
1896-1900	20·3	17·7
1901-05	19·0	16·0
1906-10	16·9	14·7
1911-15	19·8	14·3
1916-20	16·6	14·4
1921-25	12·3	12·1
1926	12·0	11·6
1927	11·4	12·3
1928	12·0	11·7
1929	14·6	13·4

Table 6 gives the number of births and deaths occurring in the different wards during 1929, and Table 8 shows the death rate in the borough since 1880.

Seasonal Deaths.—The following statement gives the number of deaths which occurred in St. Helens in each quarter of the year, with the death rate for each quarter, and the death rates for England and Wales for the same periods.

				Death rate per 1,000 of population		
				St. Helens		England & Wales
No. of Deaths.						
First Quarter	...	...	656	...	23·7	20·9
Second Quarter	...	...	331	...	12·0	12·0
Third Quarter	...	...	245	...	8·9	9·7
Fourth Quarter	...	...	269	...	9·7	11·3

Coroner's Inquests.—During the year, 126 deaths were reported to the Coroner. In 64 of these the Coroner was able without an inquest to issue a certificate attributing the death to natural causes. In 62 instances an inquest was held, and in these cases the deaths were recorded as attributable to :—

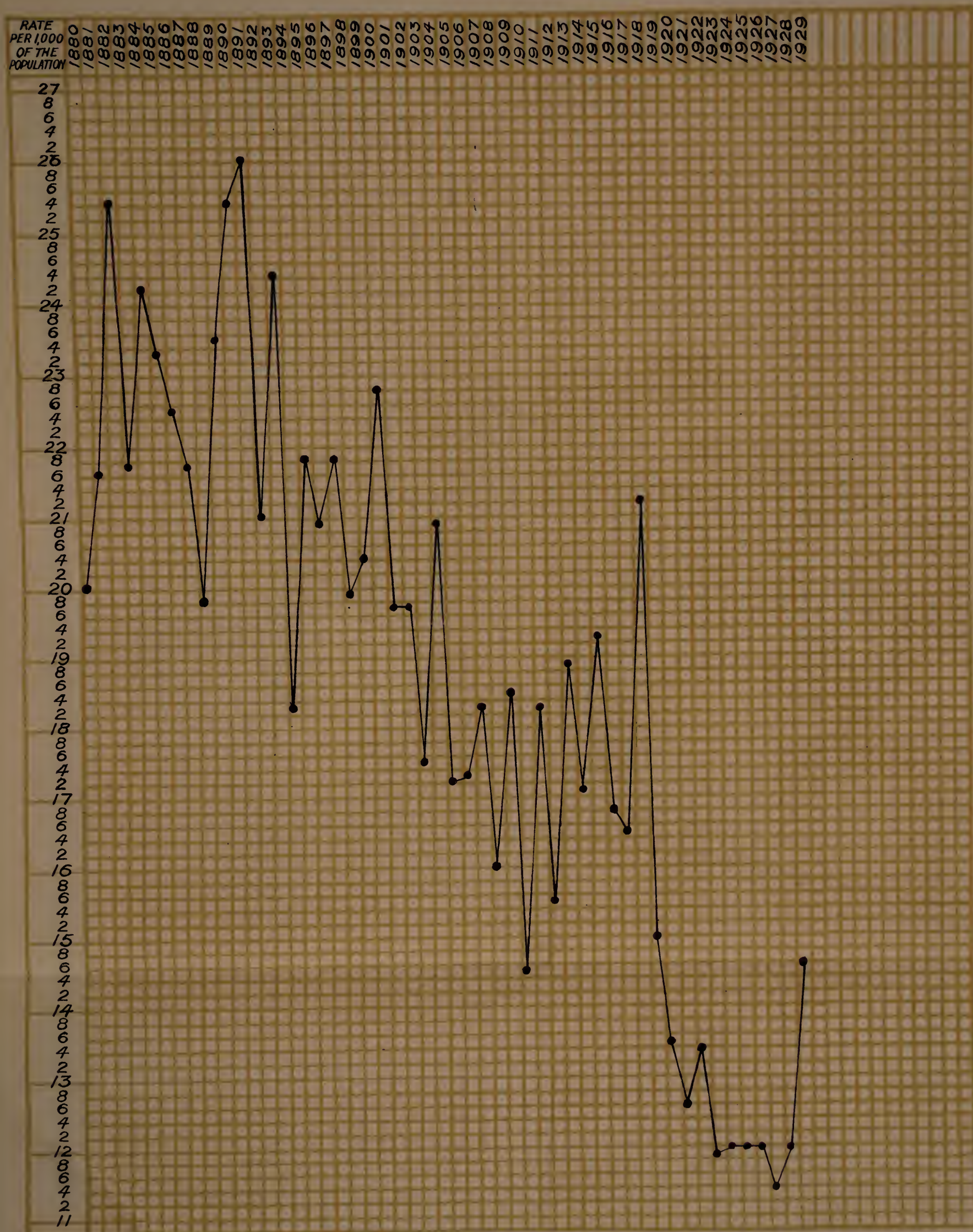
Colliery Accidents	12
Street Accidents	13
Accidents in Works.....	2
Drowning	5
Poisoning	7
Scalds and Burns	5
Other Deaths from violence.....	6
Natural Causes	8
Other Causes	4
	<hr/>
	62
	<hr/>

Causes of Death.—Figures relating to the causes of and ages at death during the year are given in Table 9.

Zymotic death rate.—The number of deaths caused by the seven “ principal epidemic diseases ” during 1929 was 99, giving a Zymotic death rate of 0·91 per 1,000 of the population.

TABLE 8.

DEATH RATE - ST HELENS, 1880-1929.



The death rate is not corrected for age & sex distribution.

10

DEATH RATE - 1924

1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100



This shows an increase over the previous year (0·67 per 1,000 of population during 1928) mainly due to an increase in the number of deaths from measles. There has, however, been a decrease in the number of deaths due to whooping cough (21 deaths in 1928 and 13 deaths in 1929). The epidemic of scarlet fever which occurred in 1928 and persisted into the first half of 1929 had very little effect on this death rate, as the type of the disease was, on the whole, mild in character.

The causes of these deaths during 1929 were as follows :

Diarrhœa and enteritis (under 2 years)	19
Whooping Cough	13
Measles	49
Scarlet Fever	6
Diphtheria (including membranous croup)	11
Fever (enteric, typhus, and simple continued fever).....	1
Small-pox	0

Table 3 shows the figures since 1880.

Deaths from Tuberculosis.—Tuberculosis was the cause of 115 deaths during the year—that is 7·19% of all deaths belonging to the borough. Of these deaths, 91 were attributable to tuberculosis of the lungs and 24 to other forms of tuberculosis. The ages at which these deaths occurred are shown in Table 9.

Malignant Diseases.—The deaths from these diseases during the past five years were as follows :—

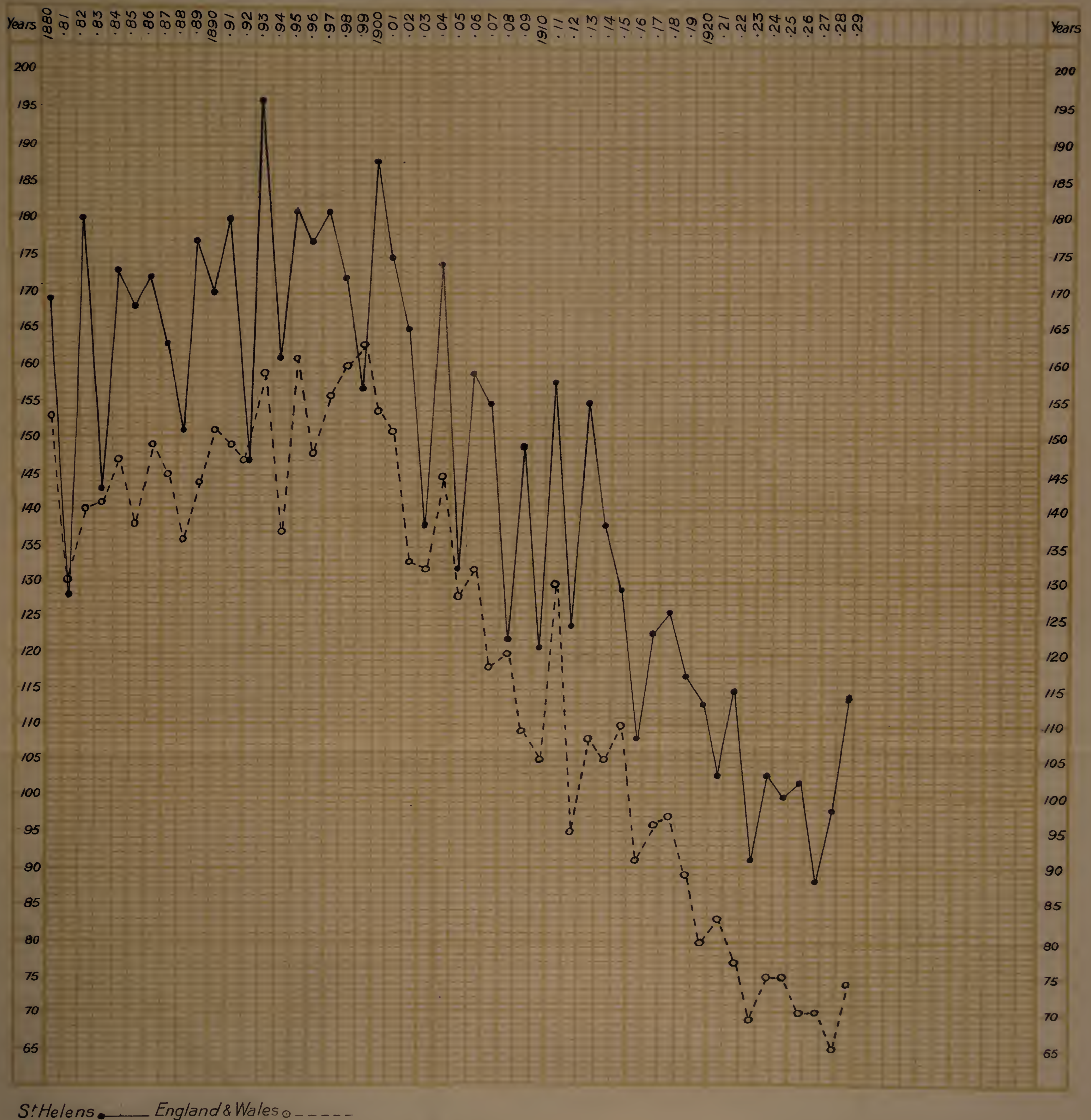
AGE				1925	1926	1927	1928	1929
Under 1 year	...	...	...	—	—	—	1	1
1—2 years	...	...	...	—	—	—	—	—
2—3	„	...	...	—	—	1	—	1
3—4	„	...	...	—	—	—	—	—
4—5	„	...	...	—	—	—	—	—
5—10	„	...	...	—	—	1	—	—
10—15	„	...	...	—	—	—	—	—
15—20	„	...	...	1	—	—	—	1
20—35	„	...	...	2	6	7	3	4
35—45	„	...	...	4	—	4	10	9
45—65	„	...	...	50	52	55	54	48
65 and over	...	...	...	27	44	36	53	38
Totals				84	102	104	121	102
Percentage of the total deaths				6.38	7.7	8.06	9.11	6.38
Death rate per 1,000 of population				0.76	0.92	0.91	1.09	0.93
Death rate per 1,000 of population, England and Wales				1.33	1.36	1.38	1.43	1.44

Cause of, and age at, death during 1929.

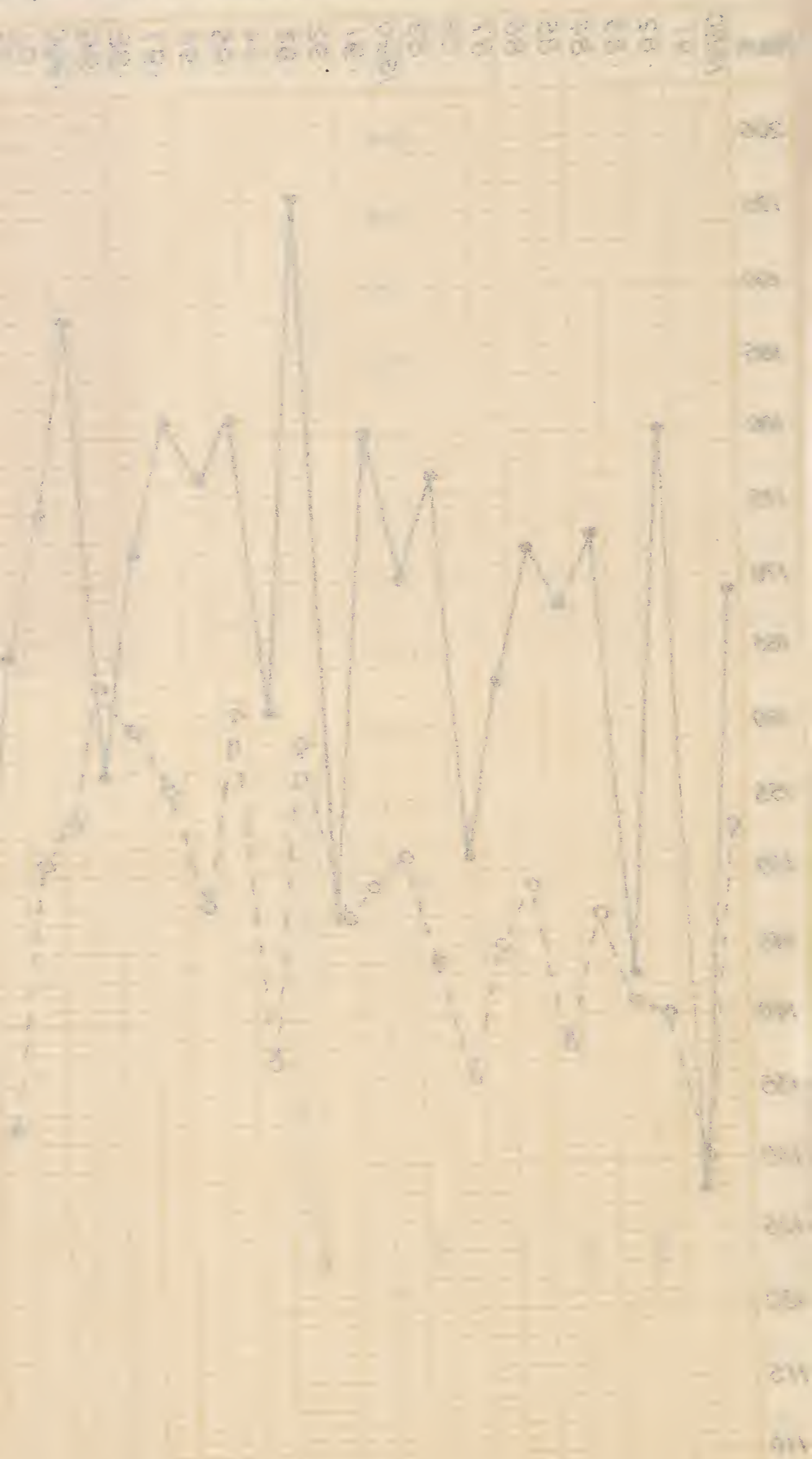
Causes of Death	Sex	All Ages	At Ages								
			0-1	1—	2—	5—	15—	25—	45—	65	75—
All Causes	M F	875 724	130 127	58 55	46 48	37 30	39 35	109 93	221 138	145 109	90 89
Enteric Fever	M F	1 —	— —	— —	— —	— —	1 —	— —	— —	— —	— —
Small-pox	M F	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
Measles	M F	24 25	7 6	6 14	9 5	2 —	— —	— —	— —	— —	— —
Scarlet Fever	M F	2 4	— —	— 1	— 1	2 2	— —	— —	— —	— —	— —
Whooping Cough.....	M F	3 10	— 4	2 3	— 3	1 —	— —	— —	— —	— —	— —
Diphtheria	M F	7 4	— —	— —	4 2	2 1	1 —	— 1	— —	— —	— —
Influenza	M F	85 61	7 12	7 5	4 7	3 2	4 1	20 5	26 12	10 11	4 6
Encephalitis Lethargica	M F	1 —	— —	— —	— —	— —	— —	1 —	— —	— —	— —
Meningococcal Meningitis	M F	1 —	1 —	— —	— —	— —	— —	— —	— —	— —	— —
Tuberculosis of Respiratory System	M F	51 40	— —	— —	— 1	2 3	10 11	23 22	14 3	2 —	— —
Other Tuberculous diseases	M F	16 8	1 —	3 —	3 2	6 1	2 4	— 1	1 —	— —	— —
Cancer, Malignant disease	M F	54 48	— 1	— —	1 —	— —	— 3	4 7	25 23	19 8	5 6
Rheumatic Fever.....	M F	1 4	— —	— —	— —	— 2	1 —	— 2	— —	— —	— —
Diabetes	M F	4 7	— —	— —	— —	— —	1 —	1 1	1 3	1 2	— 1
Cerebral Haemorrhage, etc.	M F	59 30	— —	— —	— —	— —	— —	1 —	21 8	19 10	18 12
Heart disease	M F	95 106	— —	— —	— —	2 1	5 2	6 13	41 36	27 33	14 21
Arterio-sclerosis	M F	27 8	— —	— —	— —	— —	— —	— —	9 1	12 6	6 1
Bronchitis	M F	61 56	11 9	3 6	2 2	— —	— —	3 1	17 8	10 12	15 18
Pneumonia (all forms)	M F	124 106	24 29	27 20	15 18	4 7	5 3	16 14	18 8	13 7	2 —
Other respiratory diseases.....	M F	8 8	— —	— —	— 1	— 1	— 1	3 —	3 3	2 1	— 1
Ulcer of Stomach or duodenum.....	M F	8 —	— —	— —	— —	— —	— —	2 —	5 —	1 —	— —
Diarrhoea, etc.	M F	13 10	7 8	4 —	— 1	— —	— —	1 1	— —	1 —	— —
Appendicitis and typhlitis	M F	2 4	— —	— —	— —	— —	1 2	— 1	— —	1 1	— —
Cirrhosis of Liver	M F	3 3	— —	— —	— —	— —	— —	— —	3 3	— —	— —
Acute and chronic Nephritis	M F	14 11	— —	— —	— —	— —	3 —	4 2	2 6	3 1	2 2
Puerperal Sepsis	M F	— 7	— —	— —	— —	— —	— 2	— 5	— —	— —	— —
Other Accidents and diseases of pregnancy and parturition	M F	— 6	— —	— —	— —	— —	— 2	— 4	— —	— —	— —
Congenital debility and malformation, Premature birth	M F	45 45	45 44	— —	— —	— —	— —	— —	— 1	— —	— —
Suicide	M F	10 3	— —	— —	— —	— —	1 —	4 2	3 1	1 —	1 —
Other Deaths from violence	M F	34 12	1 1	— 2	4 3	7 1	2 —	7 1	9 1	2 1	2 2
Other defined disease	M F	115 94	26 13	6 3	3 2	6 9	2 4	12 9	22 19	17 16	21 19
Causes ill-defined or unknown	M F	7 4	— —	— 1	1 —	— —	— —	1 1	1 2	4 —	— —
Totals ...		1599	257	113	94	67	74	202	359	254	179

Table 10.

INFANT MORTALITY RATE, S^T HELENS AND ENGLAND AND WALES - 1880-1929.



INFANT MORTALITY RATE



The death shown as occurring under 1 year of age was that of a child aged five months who was operated on for sarcoma of the arm and died from post operative shock. The death in the 2—3 year age group was that of a child with sarcoma of the kidney.

There would appear to be no relationship between the incidence of malignant diseases and industrial processes in St. Helens.

Other causes of death.—The following extract from Table 9 shows some of the other principal causes of death :—

	Number	Percentage of total deaths
Pneumonia (all forms)	230	14·38
Bronchitis and other Respiratory Diseases	133	8·32
Influenza	146	9·13
Heart Disease	201	12·57
Cerebral Hæmorrhage, etc.	89	5·07
Suicide and other deaths from violence	59	3·69

Infant Mortality.—During 1929 there were 257 deaths of children under one year of age. This corresponds to an infant mortality rate of 113·8 per 1,000 births. The infant death rate for 1928 was 98·5.

Further reference to this subject is made in the Maternity and Child Welfare Section.

Table 10 shows the infant death rate for St. Helens since 1880, and the figures for England and Wales for the same period.

III.—INFECTIOUS DISEASES.

The following are the infectious diseases compulsorily notifiable to the Medical Officer of Health in St. Helens :—

Small Pox	Puerperal Fever
Scarlet Fever	Puerperal Pyrexia
Diphtheria and Membranous	Cerebro Spinal Fever
Croup	Acute Poliomyelitis
Enteric Fever	Acute Polio Encephalitis
Typhus Fever	Acute Encephalitis Lethargica
Relapsing Fever	Ophthalmia Neonatorum
Continued Fever	Erysipelas
Dysentery	Malaria
*Pneumonia	†Measles and German Measles
Cholera	†Whooping Cough
Plague	Tuberculosis (all forms)

**Acute Primary Pneumonia and Acute Influenzal Pneumonia.*

†*Notification by medical practitioner is not required if the disease "has occurred in the same family or institution and been notified within the period of two months immediately preceding the date on which he first becomes aware of a further case."*

Table 11 shows the total number of cases notified during the year, the total number of deaths which occurred, and the numbers admitted to the Corporation Hospitals.

Table 12 gives the age distribution of the cases notified, and Table 9 the age distribution of the deaths which occurred. The number of cases notified during each week of the year is shown in Table 13, and the number of notifications each year during the past 10 years is seen in Table 14.

Table 11.

Infectious Diseases, 1929.—Total number of cases notified, number of cases admitted to hospital and the total deaths.

DISEASE	Notifications received	Cases admitted to hospital	Total Deaths
Smallpox	—	—	—
Diphtheria	170	171	11
Scarlet Fever	506	449	6
Enteric Fever	2	2	1
Typhus Fever	—	—	—
Puerperal Fever	16	13	} 7
Puerperal Pyrexia	25	9	
Erysipelas	77	16	
Pneumonia	491	6	230
Ophthalmia Neonatorum	24	6	1
Poliomyelitis	9	1	—
Encephalitis Lethargica	1	2	1
Cerebro Spinal Fever	1	—	1
Dysentery	1	—	1
Measles	1995	54	49
Whooping Cough	685	1	13
Malaria	—	—	—

Table 12.

Age distribution of cases of Infectious Diseases notified during 1929.

[illegible]

Table 13.

Infectious Diseases.—Number of cases of Infectious Diseases notified each week in 1929.

Week Ending	Cerebro Spinal Fever	Diphtheria	Dysentery	Encephalitis Lethargica	Enteric Fever	Erysipelas	Measles	Malaria	Ophthalmia Neonatorum	Pneumonia	Poliomyelitis	Puerperal Fever	Puerperal Pyrexia	Scarlet Fever	Smallpox	Whooping Cough
Jan. 5	-	-	-	-	-	3	28	-	-	7	-	-	-	29	-	11
12	-	-	-	-	-	5	37	-	-	3	-	1	1	40	-	16
19	-	4	-	-	1	2	28	-	1	7	-	-	1	40	-	12
26	-	3	-	-	-	3	77	-	1	13	-	-	1	27	-	19
Feb. 2	-	4	-	-	-	1	57	-	1	56	-	-	4	18	-	11
9	-	2	-	-	-	1	110	-	-	70	-	-	1	17	-	12
16	-	6	-	-	-	2	90	-	-	49	-	-	-	15	-	10
23	-	3	-	-	-	2	145	-	-	16	-	1	-	20	-	15
Mar. 2	-	12	-	-	-	2	120	-	-	8	-	-	-	5	-	6
9	-	4	-	-	-	-	127	-	-	7	-	-	-	17	-	15
16	-	4	-	-	1	5	117	-	-	10	-	1	3	10	-	15
23	-	2	-	-	-	4	107	-	-	4	-	-	-	7	-	9
30	-	1	-	1	-	2	90	-	1	9	-	-	-	8	-	13
April 6	-	6	-	-	-	2	101	-	-	13	-	-	-	7	-	7
13	-	6	-	-	-	3	80	-	1	10	-	-	1	4	-	8
20	-	2	-	-	-	1	87	-	1	6	-	1	-	7	-	8
27	-	5	-	-	-	1	72	-	1	7	-	2	1	1	-	8
May 4	-	-	-	-	-	5	45	-	-	9	-	1	-	10	-	3
11	-	-	-	-	-	-	70	-	-	10	-	-	-	9	-	3
18	-	5	-	-	-	2	54	-	1	7	-	1	-	9	-	6
25	-	1	-	-	-	1	59	-	1	5	-	-	-	4	-	1
June 1	-	1	-	-	-	1	71	-	1	11	-	1	-	3	-	2
8	-	1	-	-	-	3	34	-	1	3	-	-	-	10	-	2
15	-	4	-	-	-	1	27	-	1	5	-	-	-	6	-	3
22	-	4	-	-	-	-	29	-	-	6	-	1	1	2	-	-
29	-	4	-	-	-	1	14	-	-	6	-	-	-	4	-	4
July 6	-	4	-	-	-	-	19	-	1	4	-	-	1	8	-	8
13	-	4	-	-	-	-	9	-	-	5	-	-	-	3	-	8
20	-	2	-	-	-	-	14	-	-	11	-	-	-	3	-	5
27	-	-	-	-	-	1	11	-	1	5	-	-	-	3	-	7
Aug. 3	-	2	-	-	-	-	5	-	1	8	-	-	-	2	-	6
10	-	4	-	-	-	2	6	-	-	6	-	-	1	4	-	2
17	-	3	-	-	-	1	3	-	-	2	-	-	1	6	-	11
24	-	1	-	-	-	2	2	-	-	1	-	-	1	9	-	7
31	-	3	-	-	-	1	5	-	3	6	-	-	-	7	-	15
Sep. 7	-	3	-	-	-	-	4	-	-	1	-	-	-	5	-	23
14	-	2	-	-	-	1	1	-	-	9	-	-	-	11	-	9
21	-	1	-	-	-	1	1	-	-	6	-	-	-	11	-	23
28	-	5	-	-	-	1	2	-	-	4	-	-	2	7	-	12
Oct. 5	-	-	-	-	-	-	2	-	-	2	-	-	1	4	-	18
12	-	5	-	-	-	-	2	-	-	3	-	-	-	9	-	16
19	-	-	-	-	-	1	3	-	-	7	2	-	-	5	-	20
26	-	2	-	-	-	2	1	-	-	8	4	1	-	8	-	15
Nov. 2	-	3	-	-	-	3	1	-	-	6	-	-	-	9	-	24
9	-	3	-	-	-	2	3	-	-	3	3	1	-	9	-	32
16	-	4	-	-	-	1	4	-	1	3	-	-	-	8	-	24
23	-	7	-	-	-	-	1	-	-	9	-	-	-	9	-	39
30	-	4	-	-	-	1	5	-	1	5	-	-	3	10	-	30
Dec. 7	-	3	-	-	-	-	5	-	1	4	-	-	-	10	-	38
14	-	6	-	-	-	1	5	-	2	7	-	2	-	8	-	31
21	-	8	1	-	-	3	2	-	-	4	-	1	-	6	-	30
28	1	7	-	-	-	-	3	-	1	5	-	1	1	3	-	13
Total	1	170	1	1	2	77	1995	-	24	491	9	16	25	506	-	685

Table 14.

Notifications of Infectious Diseases received during the undermentioned years.

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Diphtheria ...	128	51	88	105	89	145	103	131	153	170
Scarlet Fever ...	474	232	190	258	163	241	153	206	1111	506
Enteric Fever ...	—	2	3	2	2	7	1	1	1	2
Puerperal Fever ...	13	18	10	4	17	16	7	6	11	16
†Puerperal Pyrexia...	—	—	—	—	—	—	10	23	20	25
Pneumonia ...	148	77	233	190	126	242	256	209	263	491
Erysipelas ...	53	79	42	53	40	70	42	70	80	77
Ophthalmia										
Neonatorum ...	63	42	48	30	34	16	23	23	20	24
Poliomyelitis ...	1	2	1	1	1	1	—	—	—	9
Continued Fever ...	—	1	—	—	—	—	—	—	—	—
Encephalitis										
Lethargica ...	4	1	—	9	4	2	3	2	3	1
Polio-Encephalitis...	—	2	—	—	—	—	—	—	—	—
Dysentery ...	17	21	42	6	—	3	6	1	13	1
Malaria ...	22	2	—	—	—	—	—	1	—	—
Measles ...	2960	196	3437	74	3513	1850	1625	2892	1465	1995
Whooping Cough ...	287	576	388	895	235	920	304	448	649	685
Cerebro-Spinal Fever	1	—	—	1	2	2	2	—	—	1
Smallpox ...	—	—	1	—	—	—	—	—	2	—
Typhus Fever ...	—	—	—	—	8	—	—	—	—	—

† Notifiable since 1st October, 1926.

SMALLPOX.—No case of smallpox was notified during the year.

The extent of vaccination in St. Helens since 1901 is shown in Table 15.

Table 15.

Vaccination returns since 1901.

YEAR	2 Vaccinated	3 Insus- ceptible	4 Dead	5 Con- scientious Objector	6 Post- poned	7 Re- moved	8 Unaccounted	Percentage not Vaccinated including Columns 5, 6, 7, 8
1901	2,639	4	391	11	29	59	24	4.4
1902	2,788	4	342	7	12	58	34	3.8
1903	2,977	8	325	2	6	62	11	2.6
1904	2,940	7	341	10	10	42	25	2.8
1905	2,923	3	270	6	10	29	18	2.1
1906	2,733	5	318	8	12	39	22	2.8
1907	2,810	9	257	24	19	49	17	3.7
1908	2,858	18	248	70	11	35	20	4.5
1909	2,720	8	241	81	9	33	11	4.7
1910	2,731	3	255	131	3	23	19	6.0
1911	2,750	9	277	148	5	26	14	6.5
1912	2,646	4	294	216	12	23	4	8.7
1913	2,499	6	296	339	14	27	9	13.0
1914	2,654	11	281	348	6	22	24	13.0
1915	2,352	2	189	367	9	34	15	15.3
1916	2,056	4	186	287	3	39	24	14.6
1917	1,702	4	158	267	1	6	45	15.7
1918	1,861	0	201	281	8	40	19	14.5
1919	1,999	2	189	385	4	25	18	17.8
1920	2,452	1	223	553	12	18	23	19.8
1921	2,234	2	179	530	6	29	17	20.6
1922	2,143	7	185	411	5	27	23	17.8
1923	2,144	10	139	261	4	10	22	12.17
1924	2,227	7	156	157	6	12	25	8.24
1925	2,150	2	147	234	8	10	26	11.45
1926	2,084	8	151	237	14	9	14	11.62
1927	1,984	7	145	196	10	20	11	10.67
1928	1,990	5	149	242	8	20	8	12.26 †

† Of the 12.26 per cent unvaccinated, 10.67 per cent. are conscientious objectors.

SCARLET FEVER.—During 1929, 506 cases were notified and there were 6 deaths attributed to this disease. The epidemic prevalence of this disease continued from 1928 into the first three months of 1929. During this period of three months 44 carefully chosen cases were allowed to remain at home, where overcrowding and adverse home circumstances did not exist. During the remainder of the year cases occurred sporadically, with a few exceptions where families were affected. Scarlatina serum was used in the treatment of severe cases admitted to the Borough Isolation Hospital.

Of the 449 cases of scarlet fever admitted to hospital during the year, 9 were "return cases" (2.0%). The average duration of stay of all cases admitted to hospital was 26.2 days, but, if the cases occurring during the period of pressure on hospital accommodation be excluded, the average duration of stay was 28.5 days.

The following statement shows the age distribution of all cases occurring and of the deaths—

Age.	No. of Cases.	No. of Deaths.	Case Mortality.
Under 5 years.....	148	... 2 ...	1.3%
5—15 years.....	296	... 4 ...	1.3%
15—35 „	56	... — ...	—
35—45 „	6	... — ...	—
45—65 „	—	... — ...	—

DIPHTHERIA.—During 1929, 170 cases were notified with 11 deaths. The following statement shows the age distribution of the cases and of the deaths occurring :—

Age.	No. of Cases.	No. of Deaths.	Case Mortality.
Under 5 years.....	48	... 6 ...	12.5%
5—15 years.....	74	... 3 ...	4.1%
15—35 „	38	... 2 ...	5.3%
35—45 „	9	... — ...	—
45—65 „	—	... — ...	—
Over 65 „	1	... — ...	—

Diphtheria antitoxin may be obtained by medical practitioners either at the office of the Medical Officer of Health or at the Borough Isolation Hospital.

I would again, however, stress the importance of the early administration of serum. It cannot be too often stated that where a bacteriological examination is made a "negative" swab does not

exclude clinical diphtheria, and that antitoxin should be given in every case which is sufficiently suspicious to indicate the need for a bacteriological test. If this were done, much valuable time would be saved, and the case mortality and incidence of complications would be lowered.

The Schick Test for discovering those susceptible to diphtheria has only been used in connection with the staff of the department. All those found susceptible have been successfully immunized.

ENTERIC FEVER.—Two cases were notified during the year 1929. In one of these the diagnosis was not confirmed clinically or by bacteriological examination. The other patient, a male aged 22 years, died in the Borough Isolation Hospital after an illness of only ten days, pneumonia supervening. This was a true case of *B. typhosus* infection but it was not found possible to trace its source.

✦**MEASLES.**—As in 1928, the great majority of cases occurred during the first seven months of the year, the largest number during any one week being in the last week of February. Of the 1,995 cases notified, only 66 occurred after the end of July. There were 49 deaths from this disease, and the following statement shows the age distribution of the deaths occurring :—

Age period.	No. of cases.	No. of Deaths.	Case Mortality.
Under 5 years ...	1353	47	3·5 %
5—15 years ...	629	2	·3 %
15—35 years ...	13	—	—
Over 35 years ...	—	—	—

These figures again emphasize the important point so often stated that to prevent a child catching measles until he is five is to save him from a *dangerous* illness. It will be seen that during 1929 the case mortality under 5 years of age was 11 times that of cases over five years of age.

✦**Note.**—Further details regarding this disease will be found in that section of the Report dealing with Maternity and Child Welfare, page 49.

No attempt has been made to immunise children temporarily as is done in some American cities by injecting each baby with parental blood, but I must again point out that the facilities provided by the Corporation for home nursing or hospital treatment of these measles cases are still only used to a limited extent.

✦ **WHOOPING COUGH.**—During 1929, 685 cases were notified with 13 deaths. The age distribution of these cases and of the deaths was as follows :—

Age.	No. of Cases.	No. of Deaths.	Case Mortality.
Under 5 years	....457	... 12	... 2·6%
5—15 years	...228	... 1	... ·4%
Over 15 years	... —	... —	... —

✦ **PUERPERAL FEVER AND PUERPERAL PYREXIA.**—16 cases of puerperal fever and 25 cases of puerperal pyrexia were notified during the year, and 7 deaths were reported as due to puerperal sepsis. It is highly desirable that every case notified as suffering from puerperal fever or puerperal pyrexia should have energetic treatment, preferably in hospital, on lines suitable to the infecting organism in any given case, and for this reason admission to hospital is urged in every case. Any attempt to minimize the importance of pyrexia in a parturient woman is to expose her to a very serious danger.

✦ **OPHTHALMIA NEONATORUM.**—24 cases were notified during 1929.

CEREBRO-SPINAL MENINGITIS.—One case was notified on Christmas Day, 1929, the notification being received by post on the 27th December. The child died on Boxing Day and it was not possible to confirm the diagnosis bacteriologically.

✦ **Note.**—Further details regarding these diseases will be found in that section of the Report dealing with Maternity and Child Welfare, page 49.

POLIOMYELITIS.—Nine cases of this disease were notified during the year. St. Helens shared in a widespread outbreak of which the febrile stage occurred in August and September, the cases appearing, as frequently happens, to be mistaken for common colds or influenza until the typical paralysis occurred in mid-October. Most of these cases were attending Albion Street Orthopaedic Clinic at the end of the year.

ENCEPHALITIS LETHARGICA.—One case, a male, was notified during the year and was admitted to the Borough Isolation Hospital. He only lived two days after admission and his symptoms were consistent with the usual aspects of this disease.

ERYSIPELAS.—During 1929, there were 77 notifications, and two deaths are attributed to this disease.

DYSENTERY.—One case of this disease was notified during the year. This occurred in a patient of the County Mental Hospital, Rainhill.

MALARIA.—No case was notified during the year.

NON-NOTIFIABLE ACUTE INFECTIOUS DISEASES.—

During the early part of the year there was a short but severe epidemic of influenza, resulting in 146 deaths directly attributable to influenza as compared with 37 in 1928, and an increase of 119 as compared with 1928 in the number of deaths attributable to pneumonia and other respiratory diseases.

The number of deaths from diarrhoea, etc., in children under 2 years of age was 19. There is no doubt, however, that the majority of these deaths are not due to infective diarrhoea, but result from gastric and intestinal disturbances of a non-infectious character.

BOROUGH ISOLATION HOSPITAL.—This hospital is situated at Peasley Cross, and has accommodation for 136 patients in six pavilions. I would again urge the necessity for more small ward accommodation for the isolation of mixed infections and for cases of other infectious diseases, the numbers of which do not justify the opening of a large ward. At present there are only four side wards to which such cases can be admitted and these should properly be used for the nursing of serious cases of the diseases for which the wards to which they are respectively attached are in use. Isolated cases of the less common infectious diseases have frequently to be admitted and, when the side wards above mentioned are in use, other large wards have to be opened. I would suggest, therefore, that the provision of a small Isolation Block of single cubicles is an urgent necessity. There is no resident medical officer. Cases are also admitted to this hospital from the Urban Districts of Haydock and Rainford. At the beginning of the year there were 144 patients in hospital. New cases admitted during the year numbered 873 making a total number of 1,017 patients dealt with. At the end of the year there were 62 patients remaining. The highest number of patients under treatment at any one time was 161, and the lowest, 28.

The details of admissions and discharges are shown in Table 16.

Table 16.

Peasley Cross Isolation Hospital
Record of cases treated during 1929.

DISEASE	In hospital Jan. 1st, 1929	Admitted	Discharged	Died	In hospital Jan. 1st, 1930
Scarlet Fever ...	125	516	603	6	32
Diphtheria ...	16	182	165	11	22
Puerperal Fever ...	—	13	8	5	—
Venereal Disease ...	—	3	3	—	—
Measles ...	—	62	51	11	—
Other Diseases ...	3	85	67	15	6
Mothers with sick babies	—	1	1	—	—
Babies with sick mothers	—	11	9	—	2
Total ...	144	873	907	48	62

AMBULANCE PROVISION.—Two motor ambulances are kept at the Isolation Hospital to convey patients to either of the Corporation Hospitals. During the year the total distance travelled was 13,011 miles.

DISINFECTION.—Disinfection of premises by means of formalin sprays is carried out by the disinfectors from the Medical Officer's Department, and bedding and articles of clothing, etc. are disinfected by steam or other appropriate method at the Borough Isolation Hospital. During the year the disinfectors dealt with 2,588 premises, and the numbers of articles disinfected at the Isolation Hospital were as follows :—

	Articles.
Blankets, Sheets and Rugs	6,419
Hospital Clothing and Bedding.....	3,477
Pillows and Cushions	5,674
Mattresses, etc.	818
Other Articles of Clothing	2,916
Library Books.....	2,320
Other Articles	145

There is no municipal cleansing station, but facilities for the cleansing and disinfection of persons and their belongings are afforded at the Borough Isolation Hospital. School children are also removed to this Institution for compulsory cleansing when required.

IV.—LABORATORY WORK.

The majority of the routine bacteriological and pathological examinations are carried out by the medical staff at the Borough Laboratory at the Town Hall, but bloods for the Wasserman reaction and specimens of an unusual nature are examined at the City Laboratories, Liverpool. Table 17 shows the numbers of specimens dealt with during 1929.

Outfits for the collection of specimens of sputa, blood specimens, throat swabs, etc., are supplied free of charge.

Table 17.

SPECIMENS.	Number Received	Results	
		Positive	Negative
Swabs for Diphtheria	2386	196	2190
Blood for Typhoid Fever	10	3	7
Sputa for Tuberculosis	680	155	525
Hairs for Ringworm	13	4	9
Blood for Wasserman Reaction	229	37	192
Films for Gonococci	218	69	149
Pus and other fluids and discharges for various organisms	73	25	48
Other Specimens	26	6	20
Total	3635	495	3140

Specimens requiring chemical analysis are dealt with by the Public Analyst at his laboratories.

V.—TUBERCULOSIS.

INCIDENCE.—Particulars of new cases of tuberculosis notified in the area during 1929 are given in Table 18, and the number of new cases each year since 1912 in Table 19.

Table 18.

Particulars of new cases and of deaths during 1929.

Ages	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	Males	Females	Males	Females	Males	Females	Males	Females
Under 1 year ...	—	—	2	—	—	—	1	—
1 to 5 years ...	—	2	8	5	—	1	6	2
5 to 10 years ...	5	8	8	5	—	—	5	1
10 to 15 years ...	3	4	2	7	2	3	1	—
15 to 20 years ...	8	8	3	2	3	5	1	1
20 to 25 years ...	8	6	2	1	7	6	1	3
25 to 35 years ...	13	17	2	2	14	15	—	—
35 to 45 years ...	15	8	—	—	9	7	—	1
45 to 55 years ...	15	2	—	—	12	—	—	—
55 to 65 years ...	5	1	—	—	2	3	1	—
65 upwards ...	2	—	1	—	2	—	—	—
Totals ...	74	56	28	22	51	40	16	8

Table 19.

Number of new cases notified and number of deaths each year, 1912 to 1929.

Year	Cases notified		Deaths		Death Rate per 10,000 of population	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary
1912	130	—	91	65	9.27	6.02
1913	253	164	100	90	10.05	9.0
1914	207	116	113	65	11.2	6.45
1915	203	126	99	56	10.7	6.07
1916	189	137	127	41	14.1	4.5
1917	198	62	121	42	13.3	4.64
1918	144	40	107	34	11.8	3.75
1919	150	56	99	31	9.8	3.08
1920	221	65	82	37	7.9	3.53
1921	179	63	102	32	9.7	3.05
1922	167	58	78	39	7.3	3.66
1923	141	45	85	27	8.0	2.52
1924	154	75	118	27	10.8	2.48
1925	141	88	97	25	8.8	2.28
1926	140	68	91	32	8.2	2.92
1927	129	61	74	22	6.5	1.95
1928	139	68	84	21	7.6	1.90
1929	130	50	91	24	8.3	2.2

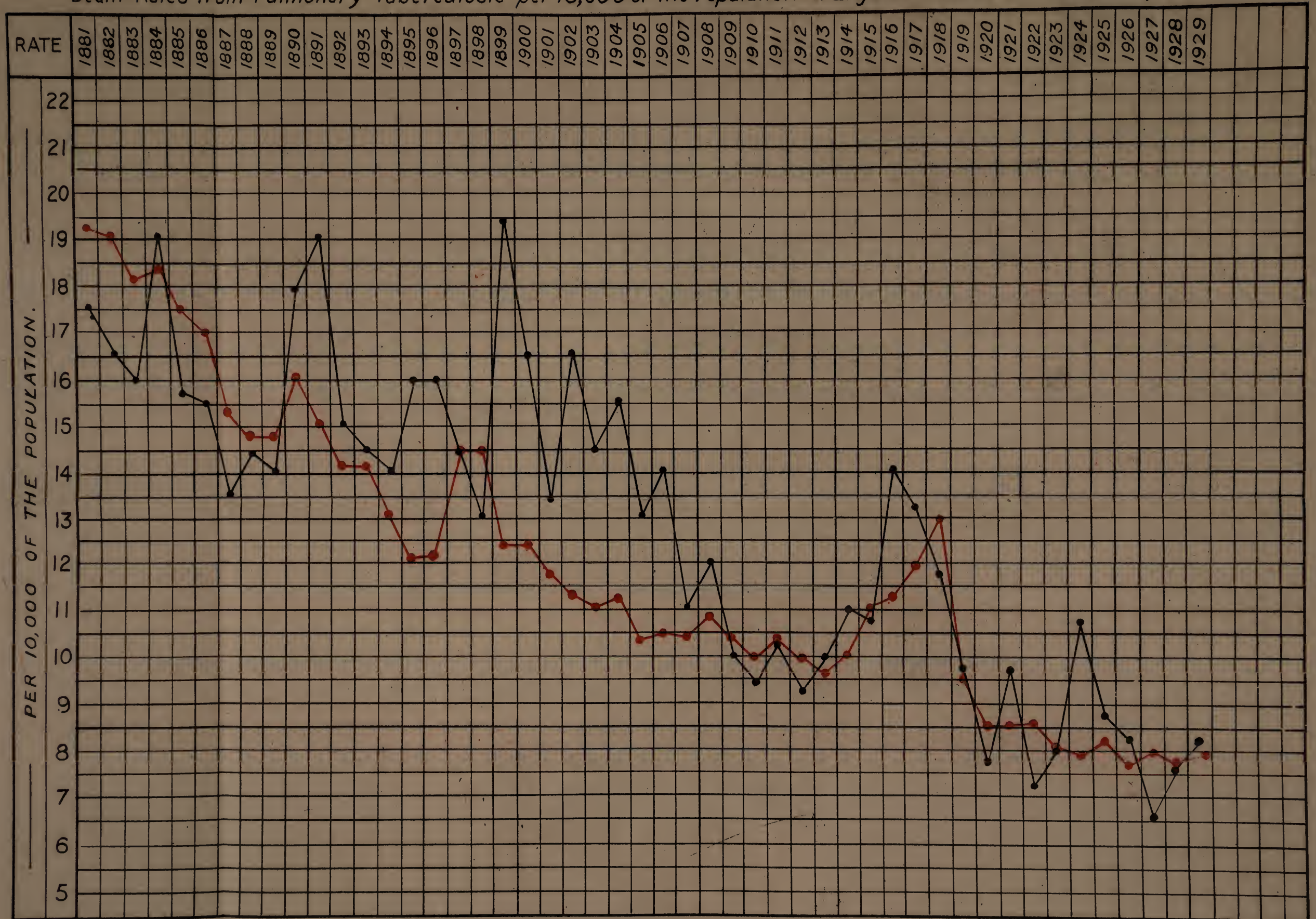
At the end of 1929, there remained on the Tuberculosis Register in St. Helens 549 cases of pulmonary and 395 cases of non-pulmonary tuberculosis.

Of the 130 new cases of pulmonary tuberculosis notified during 1929, 34 died during the year and the average duration of life after notification in these cases was 43.2 days. In 10 cases death occurred within one week of notification. Furthermore, of the 91 deaths from pulmonary tuberculosis registered during 1929, 8 were not previously notified as suffering from the disease.

It is known that occasionally the diagnosis of tuberculosis is not possible till just before or even till after death, but the above figures would appear to indicate that notification has been, as in former years, delayed unnecessarily. This may be accounted for

Table 20.

Death Rates from Pulmonary Tuberculosis per 10,000 of the Population in England & Wales and St. Helens, 1881 - 1929.



Black: St. Helens.

Red: England and Wales.

partly by reluctance on the part of the patient to seek advice, but it is also almost certainly a fault of the medical practitioner who is still too anxious to spare the feelings of his patient or more often of the relatives. This difficulty would quickly disappear were the general practitioners to co-operate more heartily with the Tuberculosis Department.

MORTALITY.—During 1929, there were within the borough 115 deaths from all forms of tuberculosis, giving a Tuberculosis Death Rate of 10·5 per 10,000 of the population. Of these deaths 91 were due to pulmonary tuberculosis and 24 to non-pulmonary tuberculosis, giving a pulmonary death rate of 8·3 per 10,000 of the population and a non-pulmonary death rate of 2·2.

The ages at which these deaths occurred are shown in Table 9 and the number of deaths and the death rate from each form of the disease each year since 1912 in Table 19.

TUBERCULOSIS DISPENSARY.—It will be observed from Table 18 that both the greatest number of new cases and the greatest number of deaths for the year occur in the age period 25—35 years and that the figures for age periods just before and just after are also very high. The significance is that the disease is prone to occur in men and women who are the parents of young families. This explains a good deal of the delay in seeking early advice and, if such parents do undertake treatment, their domestic difficulties are almost certain to interfere with it. An attempt is made to spread the knowledge that economically, both as regards the sufferer and the community generally, the sooner the disease is found and the sufferer put under suitable treatment for a sufficient length of time, the better, no matter what his domestic circumstances are at the time. A consumptive with active disease can at the best delay only a few weeks or months before he finally gives up. By this time it is too late and treatment cannot be expected to do more than preserve a very low standard of physical fitness. Had the same consumptive commenced treat-

ment a few months earlier, his chance of regaining a useful degree of health would have been infinitely increased. It is from the teaching of these facts that the most lasting benefit of a Tuberculosis Clinic is to be expected.

During 1929, five sessions per week were held at the Central Dispensary for ordinary cases and one session weekly for X-ray. One session was held weekly at Sutton until the end of August but, as the attendances were practically nil, this clinic was discontinued as from that date.

Table 21.

Record of the work of the Dispensary during 1929.

	Pulmonary				Non-Pulmonary				Total			
	Adults		Children		Adults		Children		Adults		Children	
	M	F	M	F	M	F	M	F	M	F	M	F
A. New cases examined (excluding contacts)												
1. Definitely Tuberculous ...	36	31	4	10	6	4	10	12	42	35	14	22
2. Doubtfully Tuberculous ...	—	—	—	—	—	—	—	—	18	11	18	22
3. Non-Tuberculous ...	—	—	—	—	—	—	—	—	28	16	36	33
B. Contacts examined												
1. Definitely Tuberculous ...	—	2	—	—	—	—	—	—	—	2	—	—
2. Doubtfully Tuberculous ...	—	—	—	—	—	—	—	—	2	2	1	4
3. Non-Tuberculous ...	—	—	—	—	—	—	—	—	7	11	5	8
C. Cases written off Register												
1. Cured ...	3	3	1	1	—	1	7	6	3	4	8	7
2. Diagnosis not confirmed or Non-Tuberculous ...	—	—	—	—	—	—	—	—	49	35	51	53
D. Number of persons on Register 31st December												
1. Diagnosis completed ...	139	86	63	78	25	27	101	102	164	113	164	180
2. Diagnosis not completed ...	—	—	—	—	—	—	—	—	42	33	37	38

During the year, 295 new cases and 42 contacts were added to the Dispensary Register, and 11 cases were re-entered on the Register or were transferred from other areas : 22 cases were discharged from the Register as cured, 188 were written off as non-tuberculous, 77 died, and 15 were transferred to other areas or were lost sight of. This left at the end of the year 771 persons on the Register.

The numbers of attendances made at the Dispensary were 2,964 at ordinary sessions and 576 at X-Ray sessions, giving a weekly average attendance of 52 and 11 respectively. A detailed return showing the work of the Dispensary during the year is given in Table 21. The number of consultations with medical practitioners was :—

(a)—At the homes of the patients..... 13

(b)—Otherwise 52

At the X-Ray department 14 cases of tubercular adenitis and 17 cases of tubercular skin affections made 572 attendances for treatment, and 4 X-Ray examinations of chests were carried out. The present X-Ray apparatus is quite useless for the purpose of diagnosis and, since modern methods require very often this additional aid in detecting the disease, it is necessary to have examinations done elsewhere. This is not the most satisfactory method for various reasons and it would be well to consider renewing the present apparatus.

In the treatment of glands and skin tuberculosis, X-Ray treatment has been found very useful, though again modern methods and findings indicate that Ultra-Violet Ray treatment is more satisfactory and should be available in a modern Tuberculosis Clinic.

During the year 66 specimens of sputum were examined in connection with the dispensary and 11 found positive.

During the year the tuberculosis officer paid 76 visits to the homes of patients, and in the following-up of cases 1,568 visits were paid by the tuberculosis nurse, health visitors, and orthopaedic nurse. In addition 658 visits were paid by nurses and health visitors under the Public Health (Tuberculosis) Regulations, 1912.

During 1929, 42 contacts were examined and of these 2 were found to be definitely tuberculous, 9 were doubtfully tuberculous and 31 were non-tuberculous.

It would be well if all persons living in close association with a notified case of tuberculosis were to avail themselves of the opportunity given them of being examined by the Tuberculosis Officer. An attempt is made in each notified case to examine all the contacts, but the result is disappointing. Many, unfortunately, refuse because they have reason to suspect that their health is not quite good and fear the consequence of an examination. This, of course, can only be remedied by education. Others refuse on the grounds that they are not ill and never have been. They are difficult to convince that from the point of view of Public Health it is of some importance that they are found to be not suffering from tuberculosis, and this can only be done by examination.

Re-examinations are carried out as and when circumstances indicate, and school children contacts are kept under supervision by the School Medical Service. Doubtful cases are frequently admitted to the Sanatorium for special observation.

Home disinfection of premises and bedding was carried out in 520 instances.

The number of insured persons on the Dispensary Register at the 31st December, 1929 was 213, of whom 37 were receiving domiciliary treatment.

There are no arrangements under the Tuberculosis Scheme for the provision of Home Nursing in St. Helens, but many of the cases are dealt with by the St. Helens and District Nursing Association. Shelters are not provided in St. Helens.

During the year no cases have come to notice in which action was required under the Public Health (Prevention of Tuberculosis) Regulations, 1925 (control of tuberculous persons em-

ployed in the milk trade), nor has it been necessary to obtain compulsory removal to hospital of any patient under the Public Health Act, 1925, Section 62.

NON-PULMONARY TUBERCULOSIS.—During 1929, 31 patients suffering from tubercular glands or from lupus made 572 attendances at the Dispensary for X-ray treatment, and 32 patients suffering from the following types of disease received treatment at various residential institutions during the year :

Bones and Joints.....	16
Abdominal	6
Glandular	9
Other Organs	1

The Orthopaedic Scheme for the combined Tuberculosis, Maternity and Child Welfare, and School Medical Services appears to prove adequate, and much good has been achieved in detecting and treating at an early stage defects which, if neglected, cause serious and permanent crippling. Unfortunately, however, parents are still found who do not appreciate the value of treatment in orthopaedic cases and who refuse to avail themselves of it, usually on account of the length of time required.

A record of the work carried out during 1929 under the scheme is shown in Table 22. The supply and repair of splints and appliances is undertaken by the St. Helens Crippled and Invalid Children's Aid Society.

From Table 22 it will also be seen that on the tuberculosis side 51 cases were dealt with during the year, involving 123 attendances to see the orthopaedic surgeon, and 279 attendances for intermediate treatment. Further, 16 cases received hospital treatment for an aggregate of 2,967 days.

Table 22.

Record of work under Orthopaedic Scheme during the year 1929.

	Cases of Tuberculosis	Maternity and Child Welfare Cases	Non- tubercular School Children
Number of Cases dealt with during the year	51	173	203
Number who ceased to attend or attended for Consultation only	8	19	29
Number Discharged Cured	—	22	25
Died	1	6	2
Cases transferred to Education Account	—	31	—
Cases transferred to Tuberculosis Account	—	2	2
Number of Cases remaining under Treatment at end of 1929	42	93	145
Attendances to see Orthopaedic Surgeon	123	274	375
Attendances for intermediate treatment	279	845	1303
Visits to Homes by Orthopaedic Nurse	124	419	533
Cases treated in Royal Liverpool Children's Hospital :— Myrtle Street.....	—	6	14
Heswall	1	9	7
Cases treated in Leasowe Open-Air Hospital for Children	14	—	—
Cases treated in David Lewis' Northern Hospital	1	—	1
Cases treated in Eccleston Hall Sanatorium	—	—	—
Total number of days of Institutional Treat- ment	2967	748	1195

DENTAL TREATMENT.—In-patients at Eccleston Hall Sanatorium are examined regularly by the dental surgeon and minor treatments such as extractions, fillings, etc., are carried out and in special cases dentures are supplied. There is no special scheme for dealing with patients attending the Dispensary but urgent cases are from time to time referred to the dental surgeon for treatment.

INSTITUTIONAL TREATMENT.—Institutional treatment for cases of tuberculosis in St. Helens is provided as follows :—

(a)—Eccleston Hall Sanatorium :—maintained by the St. Helens Corporation. This institution contains 70 beds with accommodation for approximately 30 men, 18 women, and 22 children. The institution is primarily for pulmonary tuberculosis, but non-active non-pulmonary cases are admitted as and when necessary. Though originally intended for sanatorium treatment only, it has been found necessary to use this institution also for advanced cases, the proportions being approximately equal. There is a Sanatorium School for children in-patients.

(b)—Four beds are reserved at the Liverpool Sanatorium, Delamere, for early pulmonary cases.

(c)—Six beds are reserved at the Leasowe Open Air Hospital for Children for non-pulmonary cases.

(d). Occasional beds are taken as and when required for special cases at various institutions.

The average number of beds available during 1929 was as follows :—

	Observation	Pulmonary Tuberculosis	Non-Pulm. T.B.		Total
		Sanatorium and Hospital Beds	Diseases of bones and joints	Other conditions	
Adult Males	1	29	1	—	31
Adult Females	1	19	1	—	21
Children under 15 ...	2	4	10	12	28
Totals	4	52	12	12	80

Table 23 shows the extent of institutional treatment provided during 1929, and Table 24 shows the immediate results of treatment of patients discharged during the year.

Table 23.

Return showing the extent of Institutional Treatment
during the year 1929.

			In Institutions on Jan. 1	Admitted during the year	Discharged during the year	Died in the Institutions	In Institutions on Dec. 31
Number of Patients	Adults	M.	30	54	43	11	30
		F.	13	36	27	7	15
	Child- ren	M.	14	23	15	3	19
		F.	12	19	15	1	15
Number of Observation Cases	Adults	M.	1	3	4	—	—
		F.	—	1	1	—	—
	Child- ren	M.	—	—	—	—	—
		F.	1	1	1	—	1
	Total	...	71	137	106	22	80

Return showing the immediate results of treatment of patients and of observation of doubtful cases discharged from Residential Institutions during the year 1929.

Classification on admission to the Institution	Condition at time of discharge	Duration of Residential Treatment in the Institution												Total	
		Under 3 months			3—6 months			6—12 months			More than 12 months				
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.		
§Pulmonary Tuberculosis	Class T.B. minus	Quiescent ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	5	3	2	11	2	6	...	2	5	...	...	...	36
		No material improvement ...	6	4	1	...	...	...	...	1	...	1	...	...	13
		Died in Institution	1	1	1	...	...	...	...	...	...	1	...	...	4
	Class T.B. plus Group 1	Quiescent ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	2	1	...	1	1	...	3	3	...	...	1	...	12
		No material improvement ...	2	...	...	1	...	...	...	...	...	...	...	...	3
		Died in Institution ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Class T.B. plus Group 2	Quiescent ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	1	...	...	4	...	...	...	...	...	5
		No material improvement ...	2	1	...	...	...	...	...	1	...	...	...	...	4
		Died in Institution ... ..	...	...	1	...	...	...	...	...	...	...	...	...	1
	Class T.B. plus Group 3	Quiescent ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		No material improvement ...	...	2	...	...	...	...	1	2	...	1	1	...	7
		Died in Institution	5	4	1	1	1	...	...	...	...	3	1	...	16
Non-Pulmonary Tuberculosis	Bones and Joints	Quiescent or arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	...	...	1	...	1	1	1	...	5	9
		No material improvement ...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Died in Institution ... ..	...	...	1	...	...	...	...	...	...	...	...	...	1
	Abdominal	Quiescent or arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	...	...	...	...	...	1	...	...	...	1
		No material improvement ...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Died in Institution ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Organs	Quiescent or arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
		No material improvement ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Peripheral Glands	Quiescent or arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	1	...	...	2	...	1	2	...	...	...	6
		No material improvement ...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Died in Institution ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Observation for purpose of diagnosis		Under 1 week			1—2 weeks			2—4 weeks			More than 4 weeks				
	Tuberculous ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Non-tuberculous ... ..	...	...	...	...	...	...	...	...	...	4	1	1	6	
	Doubtful ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...

§ PULMONARY TUBERCULOSIS : Patients suffering from this disease are now divided into two classes, viz. : *Class T.B. minus*, which comprises those patients in whose sputum tubercle bacilli have never been found : *Class T.B. plus* comprises those cases in which tubercle bacilli have at any time been found.

Class T.B. plus is further sub-divided into three groups. *Group 1* comprises early cases who will probably have their disease arrested by a period of Sanatorium treatment. *Group 3* includes advanced cases and cases with grave complications, e.g., diabetes and tuberculosis of larynx or intestine. *Group 2* all cases of *Class T.B. plus* who cannot be placed in groups 1 and 3.

VI.—VENEREAL DISEASES.

Treatment is carried out by the Staff of the Medical Officer's Department, female cases being dealt with by the female assistant medical officer. Bacteriological examinations are carried out at the Liverpool University.

During the year, 1184 male and 92 female patients made a total of 5,154 attendances at the Treatment Centre and 3 patients received in-patient treatment for 52 days at the Isolation Hospital. Table 25 gives further details regarding these cases.

These figures show a decrease on the previous year (229 males and 101 females). The main decrease appears to be in the number of new cases of syphilis coming up for the first time, the number of gonorrhoea cases remaining approximately the same. There has also been a decrease in the number of cases returning to the Centre after being marked off in previous years as having ceased to attend or transferred to other areas.

VII.—SUMMARY (for reference) of Nursing Arrangements, Hospitals, and other Institutions available for the district.

HOME NURSING.—The St. Helens and District Nursing Association, supported by voluntary contributions, maintain a superintendent, assistant superintendent and thirteen nurses to attend non-infectious cases in their own homes. 2,374 cases were nursed during the year, the total number of visits amounting to 65,501.

Arrangements are also in operation for the Association to undertake the home nursing of cases of ophthalmia neonatorum and puerperal pyrexia, and cases of measles and whooping cough in children under 5 years of age. Under these arrangements the

Table 25.

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. No. of cases which : (a) were under treatment or observation at the beginning of the year for ...	39	29	1	—	26	8	1	—	67	37
(b) returned to the treatment centre during the year after being marked off in a previous year as having ceased to attend or transferred to other centres ...	3	9	—	—	1	2	2	1	6	12
2. No. of cases dealt with at the Treatment Centre during the year for the first time ...	19	16	2	—	54	12	36	15	111	43
Total (Items 1 and 2)	61	54	3	—	81	22	39	16	184	92
3. No. of cases which ceased to attend (a) before completing the first course of treatment for :	6	11	—	—	10	3	—	—	16	14
(b) after one or more courses, but before completion of treatment for	5	8	—	—	—	—	—	—	5	8
(c) after completion of treatment, but before final tests as to cure of	—	—	—	—	18	3	—	—	18	3
4. No. of cases transferred to other Treatment centres after treatment for ...	2	3	—	—	11	—	—	—	13	3
5. No. of cases discharged after completion of treatment and observation for ...	12	15	3	—	22	6	—	—	37	21
6. No. of cases which, at the end of the year, were under treatment or observation for	36	17	—	—	20	10	1	—	57	27
7. Out-patient attendances ... (a) for individual attention by the Medical Officer	553	493	22	—	443	212	73	27	1091	732
(b) for intermediate treatment, e.g. irrigation, dressings, etc. ...	64	21	37	—	2681	506	7	15	2789	542
Total Attendances	617	514	59	—	3124	718	80	42	3880	1274
8. Aggregate No. of "In-patient days" of treatment given to persons who were suffering from ...	16	—	—	—	27	9	—	—	43	9

Association made, during the year, a total of 2,501 visits to 45 cases of measles, 21 cases of ophthalmia neonatorum, 2 cases of puerperal pyrexia, 4 maternity cases, and 28 other cases.

MIDWIVES.—No district midwives are employed or subsidised by the public health authority. In exceptional cases however, where the patient has been unable to do so by reason of poverty, the Council have paid the midwife's fee.

CLINICS AND TREATMENT CENTRES.—The following clinics and treatment centres are provided by the Corporation :

(1).—**Maternity and Child Welfare Centres**—combined clinics for expectant and nursing mothers and for children under 5 years of age.

- (a) Town Hall Clinic ... Open Monday, Wednesday and Thursday, 2 to 4 p.m. For North and South Windle, Hardshaw, Thatto Heath, Derbyshire Hill and Parr Districts.
- (b) Albion Street Clinic ... Open Tuesday and Thursday, 2 to 4 p.m. For North and South Ecclestone and Central Districts.
- (c) Elizabeth Street Clinic... Open Tuesday, 2 to 4 p.m. For Peasley Cross and Sutton Districts.
- (d) Gartons Lane Clinic ... Open Wednesday, 2 to 4 p.m. For Marshalls Cross, Sutton Manor and Clock Face Districts.

(2).—Ante-natal Clinics—For ante-natal cases only.

- (a) Town Hall CentreTuesday, 2 to 4 p.m., and
Friday. 2 to 4 p.m.
- (b) Elizabeth Street Matern-
ity and Child Welfare
Centre Thursday, 10 to 11 a.m.
- (c) Gartons Lane Centre ... Wednesday, 2 to 3 p.m.

(3).—School Clinic, Claughton Street.—For treatment of minor ailments, throat and nose defects, eyes, dental defects and the X-ray treatment of ringworm. Minor ailments are treated daily from 9 a.m. to 5 p.m., and other defects on special days. A scale of income has been drawn up for recovery of cost of treatment in non-necessitous cases.

District Clinics for the treatment of minor ailments are also open for a few hours daily at Derbyshire Hill, Sutton and Sutton Manor and after school dental inspection, Dental Clinics are held at Sutton, Sutton Manor and Thatto Heath for varying periods.

(4).—Tuberculosis Dispensary, Claughton Street.—Open Monday from 10 to 11-30 a.m., Wednesday from 5-30 to 7-0 p.m., Thursday from 2-30 to 4 p.m., and Friday from 10 to 11-30 a.m. and from 6 to 7 p.m.

A session is also held at the Elizabeth Street Clinic from 2-30 to 4 p.m. on Friday.

(5).—Venereal Diseases Centre, Claughton Street.—Open for males on Monday, 5-30 to 7 p.m., and for females, Wednesday, 5-30 to 7 p.m. The centre is also open daily from 9 a.m. to 5 p.m. on Monday to Friday, and to 12 noon on Saturday, for irrigation, advice and prophylatic treatment,

- (6).—**Orthopædic Clinic.**—At the Maternity and Child Welfare Centre, Albion Street. Orthopaedic Surgeon attends on 1st, 3rd, and 5th Wednesdays of each month from 2 p.m. to 4 p.m.

HOSPITALS.—

Provided by the Council :—

- (1)—Borough Isolation Hospital, Peasley Cross. For Infectious Diseases (other than Small-pox). Beds : 136.
- (2)—Eccleston Hall Sanatorium for cases of Tuberculosis. Beds: 70.
- (3)—Old Whint Hospital, Haydock. For debilitated and ailing infants. Beds : 20.

Subsidised by the Council.—Sankey Small-pox Hospital, for cases of Small-pox. St. Helens pays an annual retaining fee to the Warrington Corporation and the costs of treatment of any patient admitted from St. Helens.

Other Hospitals.—*The St. Helens Hospital.*—Supported partly by subscribers and partly by contributions. For all medical and surgical non-infectious cases. A new block containing 15 beds has recently been added for maternity cases. Total accommodation about 130 beds. Out-patient department for Ophthalmic, Ear, Throat and Nose, and Gynaecological cases.

The Providence Free Hospital.—Accommodation for about 100 patients (general medical and surgical cases).

Ambulance facilities.—For infectious cases, two ambulances are maintained by the Corporation at the Peasley Cross Isolation Hospital. Both general hospitals maintain ambulances and these are used when required. The Police also maintain an ambulance for street accident cases.

VIII.—MATERNITY AND CHILD WELFARE.

NOTIFICATION OF BIRTHS.—Under the Notification of Births Acts, 2,241 live births and 100 still births were notified during the year. For these, 2,310 notifications were received from midwives and 214 from doctors.

INFANT MORTALITY.—During 1929, 2,259 births were registered, and the deaths of 257 infants under one year of age occurred, giving an infant mortality rate of 113·8 per 1,000 births as compared with 98·5 for the previous year. Of the 257 deaths under one year, 251 were legitimate children and 6 illegitimate children, giving a legitimate infant mortality rate of 114 per 1,000 legitimate births and an illegitimate infant mortality of 103·4 per 1,000 illegitimate births. The infant mortality for England and Wales was 74 per 1,000 births.

The principal causes of the deaths in 1929 were as follows :

Congenital debility, malformations and premature birth	89
Pneumonia	53
Bronchitis and other respiratory diseases	20
Diarrhoea, etc.	15
Whooping Cough	4
Tuberculosis	1
Measles	13
Due to Violence.....	2
Influenza	19
Other Causes.....	41

The following statement reviews the infant death rates per 1,000 births under the principal causes in the years 1924 to 1929.

	Infant Mortality per 1,000 Births.					
	1924	1925	1926	1927	1928	1929
Congenital Debility, malformations and premature births	44.90	38.02	38.26	43.66	44.49	39.39
Pneumonia, Bronchitis and other respiratory diseases	23.59	22.43	24.59	16.95	24.53	32.32
Measles and Whooping Cough	3.43	5.33	1.95	4.23	6.65	7.53
Diarrhoea, etc	6.85	7.98	8.59	7.20	7.90	6.65
All other Diseases	24.73	26.24	28.89	16.10	14.97	27.89

The ages at which these deaths occurred during the past five years are shown in the following statement :—

		Infant Mortality per 1,000 Births.				
		1925	1926	1927	1928	1929
Deaths under 1 day old	.....	10.27	12.49	15.26	13.30	15.05
Deaths 1 to 7 days old	.....	14.45	16.40	20.76	15.80	13.28
Deaths 1 to 4 weeks old	.....	15.21	14.44	9.32	18.71	15.08
Total mortality under 1 month old, i.e., neo-natal deaths	.....	39.93	43.34	45.35	47.81	43.38
Deaths 4 weeks to 3 months old	.....	11.03	15.61	9.74	15.38	15.05
Deaths 3 to 6 months old	.....	16.73	14.84	11.02	12.47	18.15
Deaths 6 to 12 months old	.....	32.31	28.50	22.04	22.87	37.19

From the above it will be seen that the year 1929 levied a severe toll on infant lives in St. Helens. The mortality rate (113.8 deaths per 1,000 births) is the highest since 1922. The main increase was among children aged 6 to 12 months old with a smaller increase amongst the 3 to 6 months old. Under 3 months of age there was a decrease in the mortality rate.

The chief cause of the increase was the severe epidemic of influenza combined with the severe weather in the earlier months of the year. This led to an increase, not only in the mortality directly attributed to influenza (8.4 deaths per 1,000 births in 1929 compared with a rate of 1.6 per 1,000 in 1928), but also to an increase in the death rate due to pneumonia and other respiratory diseases (32.3 per 1,000 births in 1929 compared with 24.53 per 1,000 in the previous year). Another cause of the increase in the infant mortality during the year is to be found in the measles epidemic which also occurred. The infant mortality due to this disease rose from 2.0 deaths per 1,000 births in 1928 to 5.7 per 1,000 in 1929. In connection with the increased mortality, it might be noted that St. Helens does not appear to be exceptional ; there was an increase of infant mortality during 1929 in all the County Boroughs of the Northern Counties from 83 deaths per 1,000 births in 1928 to 96 deaths per 1,000 in 1929,

The decrease in the infant mortality in infants under one month old combined with the decrease in the mortality due to congenital debility, malformations and premature births is interesting as suggesting the improving influence of ante-natal care. This work has been greatly increased in St. Helens in recent years.

STILL-BIRTHS.—The number of still-births registered during the year was 109 and, of these, 100 were notified under the Notification of Births Acts.

MATERNAL DEATHS.—During 1929, 13 deaths were registered as resulting from or in connection with childbirth, giving a maternal death rate of 5·75 per 1,000 live births. The corresponding mortality rate for 1928 was 4·57.

It is a question, however, as to how much this increase is apparent or real. During 1929 an effort (commenced in 1928 in accordance with the wishes of the Ministry of Health) was made to collect information regarding all cases of maternal deaths irrespective of the causes under which they were registered. This led to the discovery of another 4 deaths which should properly come under this classification; these had been certified as (1) uraemia, (2) pneumonia, (3) valvular disease of the heart, (4) embolism of the brain and phlegmasia alba dolens. If these be added to the 13 which were registered as maternal deaths, the true maternal mortality for St. Helens would be 7·52 per 1,000 live births, whereas during 1928 the corresponding figure was 7·08 per 1,000. It would appear, therefore, that the increase in the true mortality rate is not as great as would appear from taking only those deaths actually registered under this heading. The explanation of this fact is, I think, to be found in the more exact certification of deaths by doctors.

An analysis of the total number of 17 maternal deaths shows the true causes of deaths to be as follows :—

Puerperal sepsis	7
Primary pneumonia with premature births	3
Cardiac disease	2
Antepartum haemorrhage-placenta praevia.....	1
Post-partum haemorrhage	1
Toxaemic vomiting of pregnancy.....	1
Toxaemic vomiting of pregnancy with acute dilatation of the heart	1
Uraemia	1

The 3 deaths due to pneumonia probably would have occurred even if parturition had not intervened. The 2 deaths from heart disease occurred in women who had previously had several children and emphasise the importance of Caesarean Section with sterilisation or birth control in cases of valvular disease of the heart, especially where there is any sign of failing compensation ; this would avoid the risk of further pregnancies each of which means greater heart distress.

That nearly one half of the maternal deaths were due to puerperal sepsis is a matter of the most serious concern. Of all causes this could, and should be, the most easily preventable. Of the 7 such deaths, 6 had received no ante-natal care at all, whilst the 7th is suspected to have visited an abortionist. Further, the policy recently advocated of confinement in the home in preference to confinement in hospital, (based on the theory that the patient is immune to the home germs but not to the "foreign" germs in hospital), is not supported by this group of cases, as 6 of them were confined in their own homes and the other in a maternity home. These figures again emphasise the importance of proper ante-natal care and confinement in hospital where complications are likely to ensue or home conditions are unsatisfactory.

INFECTIOUS DISEASES IN MOTHERS AND CHILDREN.—

Puerperal Fever and Puerperal Pyrexia.—During 1929, 16 cases of puerperal fever and 25 cases of puerperal pyrexia were notified and 7 deaths occurred from puerperal sepsis. The corresponding figures for 1928 were 11 cases of puerperal fever and 20 cases of puerperal pyrexia with 4 deaths.

Here again the question arises as to whether the increase is real or apparent. There is, no doubt, an increase in willingness on the part of doctors to notify these cases in accordance with the regulations and this must account for some, if not all, of the increase. Apart from any question of increase, however, the most serious point is that puerperal sepsis of one kind or another occurred in 23 women delivered in St. Helens during the year, and nearly one half of the maternal deaths were attributable to this cause. This is a most serious reflection on the standard of the midwifery of the town. As stated previously, however, the evil effects of these puerperal infections would be greatly lessened by immediate notification and suitable hospital treatment.

The subsequent diagnoses in the 41 cases notified as puerperal fever or puerperal pyrexia were as follows :—

Puerperal Fever.....	14
Pelvic Infection	9
Pneumonia, Bronchitis and Influenza.....	8
Constipation	3
Pyelitis	1
Abscess in Ear	1
Mastitis	5
	—
	41
	—

For these cases beds are available at the Isolation Hospital and trained nurses are supplied on request for home nursing. During the year, 13 cases notified as puerperal fever and 9 cases notified as puerperal pyrexia were treated in the Isolation Hospital and in 2 cases nurses were supplied for home nursing. The

Corporation's Consultant Gynaecologist is also available if a second opinion is required, and arrangements have been made with the City Laboratory, Liverpool, for any necessary bacteriological examinations.

Ophthalmia Neonatorum.—24 cases were notified during the year. Of these, 17 were treated at home and 6 in Peasley Cross Isolation Hospital. As a result of enquiry at the end of the year it was found that all had recovered with unimpaired vision.

Measles and Whooping Cough.—172 cases of measles in children under 1 year old and 1,181 cases in children aged 1 to 5 years were notified during the year. The deaths occurring in each age group were respectively 13 and 34.

As pointed out in that part of the report dealing with infectious diseases, it is of extreme importance to prevent children of the younger age groups contracting measles. The case mortality for children under five years of age during 1929 was approximately 11 times that of children over that age. Yet parents still look upon measles as a disease which the child "must have" and "may as well get over."

76 cases of whooping cough were notified in children under 1 year old and 381 cases in children aged 1 to 5 years, the deaths due to this cause being respectively 4 and 8.

By arrangement with the St. Helens and District Nursing Association, home nursing of these cases can be carried out by the district nurses, and beds are available at the Isolation Hospital for cases requiring hospital treatment or when home conditions are such that the case cannot be properly nursed at home.

Compared with the previous year there was a decrease in the number of cases of scarlet fever and whooping cough.

Other Infectious Diseases.—Table 26 shows the number of cases of other infectious diseases which occurred in children under 5 years of age.

Table 26.
Infectious Diseases at ages 0—1 and 1—5 years.

	1929	
	Under 1 Year.	1—5 yrs.
Scarlet Fever	7	141
Diphtheria	2	46
Pneumonia	33	143
Erysipelas	4	2
Poliomyelitis	—	9
Cerebro Spinal Fever	1	—
Whooping Cough	76	381
Measles	172	1181
Polio-Encephalitis	—	—
Tuberculosis (Pulmonary)	—	2
„ (Non-Pulmonary)	2	13

INSPECTION AND SUPERVISION OF MIDWIVES.—

There were 50 midwives on the register as practising in the borough during the year, three of whom were resident midwives at the St. Helens Hospital.

The qualifications of these midwives were as follows :—

Holding the certificate of the Central Midwives Board	38
Having other recognised certificates	9
Untrained	3

Inspections of midwives were carried out on 67 occasions by medical officers, and the health visitors paid 50 routine and 145 special visits for purposes of inspection and supervision. In 16 instances it was considered necessary to suspend a midwife from practice for 24 hours after contact with an infectious case to allow of the disinfection of herself and of her appliances.

During the year the private midwives found it necessary to call medical practitioners to their assistance on 576 occasions. The reasons for sending and the number of occasions in which medical assistance was required were as follows :—

Number of cases attended by midwives.....	1837
Number and percentage in which medical assistance was obtained	576 (31·3%)
Reasons for medical assistance :—	
(a) For abortions and premature labours ...	72 (3·9%)
(b) For ante-natal illnesses... ..	51 (2·8%)
(c) For difficult confinement	232 (12·6%)
(d) For suturing the perinæum, expelling the placenta, excessive hæmorrhage, etc.	89 (4·9%)
(e) For post-natal illnesses... ..	45 (2·5%)
(f) For the child	87 (4·6%)

There has been an increase during the year in the number of cases in which medical aid was called in for abortions and ante-natal illnesses. This is due to the fact that it is becoming more common for women threatened with a miscarriage to send for a midwife than was the case in the past. As a midwife may not attend a case of abortion without calling for medical advice, the doctor is sent for and this results in the patient receiving adequate treatment for a very serious condition which in the past was not always the case.

During the financial year 1929-30, £822 8s. 6d. was paid to medical practitioners for these services, and £323 11s. 11d. was recharged to the patients.

In accordance with the Rules of the Central Midwives Board ante-natal registers are now kept by all practising midwives. In these are recorded bookings, examinations, previous history of the patient, and any ante-natal treatment advised. These registers are inspected at intervals by the medical officers and health visitors and have been found on the whole to be well kept.

MATERNITY AND NURSING HOMES.—There are 3 maternity homes in St. Helens registered under the Nursing Homes Registration Act, 1927. These have been visited from time to time and were found on the whole satisfactory. The St. Helens Hospital and the Providence Free Hospital applied for and were granted exemption from the provisions of the Act under Section 6.

HEALTH VISITING.—The following statement shows the visits paid by health visitors during the year.

To expectant mothers :—

(a) First visits.....	679
-----------------------	-----

(b) Subsequent visits	675
-----------------------------	-----

To infants under one year :—

(a) First visits.....	2,261
-----------------------	-------

(b) Subsequent visits	11,282
-----------------------------	--------

To children, aged one to five years...	18,740
--	--------

Total Visits	33,637
--------------------	--------

MATERNITY AND CHILD WELFARE CLINICS.—

At the Maternity and Child Welfare Centres, combined clinics for expectant and nursing mothers and for children under 5 years of age are held. There are seven sessions weekly, and the sessions are so arranged that the mothers may come on those days on which the health visitor for their own district is in attendance.

In addition to the combined clinics, special ante-natal clinics are held four times weekly. The number of mothers attending the Town Hall Clinic from Sutton Manor who found the bus journey too trying as the pregnancy advanced necessitated the opening of an ante-natal clinic in Gartons Lane in August. It is hoped shortly to open a further centre at Thatto Heath.

The increase in attendances at the special ante-natal clinic is most encouraging. Since their inception in 1924, the number attending has increased from 137 in that year to 1,084 in 1929. During the year 1,084 mothers made 3,653 attendances.

The number of attendances at the various clinics is shown in Table 27.

Table 27.

Attendances at Maternity and Child Welfare and Ante-natal Clinics, 1925—1929.

	1925	1926	1927	1928	1929
Maternity & Child Welfare Centres.					
1. No. of Expectant Mothers attending :					
(a) First Visits	289	430	314	327	311
(b) Subsequent visits	484	766	503	549	607
2. No. of Mothers attending :					
(a) First Visits	2023	244	2443	2284	2221
(b) Subsequent Visits	6050	8705	7307	7332	7927
3. No of Children attending :					
(a) First Visits	2481	3094	2905	2662	1958
(b) Subsequent Visits	6710	9936	8359	8067	8329
4. No. of Attendances of :					
(a) Expectant Mothers	2061	2503	1681	1669	1732
(b) Mothers	19039	29283	26220	27368	26437
(c) Children	21194	31845	28374	28708	27522
Total No. of attendances	42294	63631	56275	57745	55691
Ante-Natal Clinics.					
No. of Expectant Mothers attending	171	407	474	646	1084
No. of Attendances	331	974	1353	1815	3653

In September an Artificial Sunlight Clinic was opened at the Town Hall Centre. Sessions are held twice weekly and during the period the Clinic was open 30 children made 241 attendances. The majority of the children treated were suffering from marasmus, malnutrition and rickets. The rapid obvious improvement made by children in the first classes is most encouraging. In the case of rickets the general condition of the children is very much improved, but as there is no facility for the X-Ray examination of the bone

conditions before and during treatment, it is not easy to estimate the rate of improvement in the rachetic bone changes. It is, however, astonishing to see how soon a 'fretful' waster or a peevish rachetic child becomes a smiling placid child.

During the year the arrangements whereby the Corporation rent beds for maternity cases in the maternity block of the St. Helens Hospital have been continued. The Old Whint Hospital is, however, still being retained for ailing and debilitated children and also for maternity cases for whom accommodation is not available when required at the St. Helens Hospital. The scheme for the new maternity and child welfare hospital at Cowley Hill has now been approved by the Ministry of Health and building operations commenced early in the current year.

During 1929 the Corporation provided treatment for 203 maternity cases at the St. Helens Hospital and for 42 cases at the Old Whint Hospital. At the Old Whint Hospital during the year there were also treated 50 ailing and debilitated children, of whom 5 died.

HOSPITAL ACCOMMODATION.—Table 28 gives a summary of the children treated, whilst Table 29 shows the reasons for admission and Table 30 shows the causes of the deaths that occurred.

Table 28.

General summary of cases in Hospital for Children at Old Whint during 1929.

In Hospital on 1st Jan., 1929	Number of Admissions during Year	Average Duration of Stay in Days	Number of Cases Discharged				Deaths	Number of Cases of Infectious Disease			
			No Improvement.	Improved.	In Good Health.	Discharged on account of Illness.		Measles.	Whooping Cough.	Epidemic Diarrhoea.	Scarlet Fever.
Nil	52										
52		67	5	3	25	—	5	—	—	—	—

Table 29.

Table showing reason of admission of children to Old Whint Hospital, with number of cases under each heading.

Reason of Admission.	Number
Bronchial Pneumonia	1
Debility	4
Convulsions	2
Malnutrition	14
Rickets	15
Observation	4
Marasmus	6
Bronchitis	2
Impetigo	1
Cervical Adenitis	1
Albuminuria	1
Fits	1
	52

Table 30.

Table showing deaths of children at Old Whint Hospital, with dates and causes, period of residence, and ages.

Date	Cause of Death	Days in Hospital	Age
1929			
Mar. 20	Bronchial Pneumonia	16	17 months
May 3	Bronchial Pneumonia	10	15 "
" 22	Marasmus	50	20 "
Sept. 28	Marasmus	31	15 "
Oct. 14	Marasmus	82	10 "

MILK FOR MOTHERS AND INFANTS.—At each maternity and child welfare centre full cream dried milk is on sale at cost price. When, however, the financial circumstances of the home warrant it, the milk powder is supplied free or at less than cost price. There are no arrangements for the provision of meals for mothers.

During the year approximately 368 cwt. of dried milk were disposed of, and, of this, 352 lbs. were issued free and 38,385 lbs. at less than cost price.

Cod Liver Oil Emulsion, Malt and Oil, and Virol are also provided at the centres at cost price or free in suitable cases.

MATERNITY BAGS.—Maternity bags are issued on loan to cases in which the mothers have been unable to make the necessary provision. Bags have been lent out in 31 cases during the year.

During the winter months of the year the Miners' Distress Committee gave maternity parcels to necessitous mothers who were over 28 weeks pregnant. All these mothers had to attend at one of the ante-natal clinics to be examined for certification as to pregnancy. The giving of these parcels resulted in fewer applications for the loan of maternity bags.

MINOR AILMENTS AND DENTAL DEFECTS.—During the year, 17 children received treatment for minor ailments, and 179 mothers and 122 children received dental treatment at the school clinic.

CRIPPLED CHILDREN.—A complete record of the work of the Orthopaedic Clinic is given in Table 22 in the Tuberculosis section of the Report.

From that Table it will be seen that under the Maternity and Child Welfare service 173 crippled children under 5 years of age were dealt with. This involved 274 attendances to see the orthopaedic surgeon, and 845 attendances for intermediate

treatment. 15 cases were admitted to hospital for operation or other surgical treatment. The cases dealt with comprised the following defects :—

Infantile paralysis	23
Other forms of paralysis.....	12
Rickets	70
Congenital deformities	45
Traumatism	4
Miscellaneous	19

IX.—WELFARE OF THE BLIND.

At the beginning of 1929 there were on the Blind Register for St. Helens 145 cases and this number had increased to 165 at the end of the year. This increase was mainly due to the activities of the Society in finding cases—particularly in older persons—who came within the definition of blindness. The number fell during the first quarter of 1929 and the following is an analysis of the 145 cases on the Register as at 31st March, 1929.

Age	0—5	years	...	...	—
	5—16	„	...	...	18
	16—21	„	...	...	8
	21—50	„	...	...	50
	50—70	„	...	...	52
	70—	„	...	...	37
					<hr/>
Total					... 165
					<hr/>

Education	...	At school	.....	13
		Not at school	.....	4 (2 awaiting vacancies, and 1 mentally and 1 physically defec- tive).
Employment	...	Employed	.....	30
		Under Training	.....	7
		Not training but trainable	.....	4 (2 awaiting vacancies).
		Unemployable	.....	107

There has been a steady increase each quarter of the year and the increase appears to be mostly amongst those over 70 years of age. Previously many of these were receiving relief from the Guardians, but with the granting of relief under the Blind Persons Act, which is on a higher scale than that of the Guardians, they have naturally made application to be placed on the Register of Blind Persons. Though blind within the meaning of the Act, in the majority the blindness is the result of old age, and though perhaps it may be thought that the Blind Persons Act, 1920, was not originally intended for such persons, there is no doubt that owing to their blindness they require additional assistance.

With the exception of the care of children under 2 years of age, the education of school children and vocational training, provision for the care and welfare of the Blind in St. Helens is undertaken on behalf of the Corporation by the St. Helens and District Society for the Welfare of the Blind. Such provision has included the establishment of a workshop in Boundary Road and the supervision of home workers, the visiting of blind in their own homes for the purpose of teaching Braille and Moon Type and simple handicrafts, the raising of the income of the necessitous blind, and the general provision of some measure of social activity amongst the blind.

At the Workshop in Boundary Road employment is given to 19 workers as follows :—

Basket makers	3
Brush makers	2
Mat makers	3
Firewood choppers	6
Wool workers	3
Chair caners	2
	—
	19
	—

The Society also supervise three Home Workers (a piano tuner and two firewood choppers and vendors). In addition to wages, all workers receive augmentation of wages according to a scale laid down. Further, the Society make monetary grants to all necessitous blind to bring their total income up to a minimum of 20/- per week.

In addition to provision through the Voluntary Society for the registered blind, the Corporation themselves undertake (under Section 66 of the Public Health Act, 1925) the provision of treatment for persons suffering from disease of or injury to the eyes. This includes the provision of spectacles or other suitable treatment in cases where, by such treatment, there is reason to suppose that blindness can be prevented.

X.—LIST OF ADOPTIVE AND LOCAL ACTS, BYELAWS, AND LOCAL REGULATIONS AND ORDERS relating to the public health, in force in the district.

ADOPTIVE ACTS.

The Infectious Disease (Notification) Act, 1889, applied to :

- (1) Ophthalmia Neonatorum, by Order of the Local Government Board, which came into force on the 7th April, 1910,

- (2) Acute Poliomyelitis and Cerebro Spinal Fever, by Order of the Local Government Board, which came into force on the 19th February, 1912.

The Infectious Disease (Prevention) Act, 1890. Adopted 7th January, 1891.

The Public Health Acts Amendment Act, 1890. Parts II and III adopted 1st April, 1891. Part IV adopted 1st July, 1923. Part V adopted 24th October, 1894.

Public Health Acts Amendment Act, 1907, Sections 78, 79, 80, 81, 85, 88, 89 and 90, put in force 1st January, 1909. Sections 19, 25, 26, 27, 29, 32, 33, 34, 35, 36, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63, 64, 66, 67, 68, 93, and 95, and Part V, put in force 23rd August, 1909.

The Public Health Act, 1925, Part II, (Sections 13, 14, 15, 16, 20, 23, 25, 26, 27, 28, 30, 31, 32, and 35) ; Parts III, IV, and V, adopted 7th December, 1927, put in force on 1st February, 1928.

LOCAL ACTS with Sanitary Clauses.

The St. Helens Improvement Act, 1869.

The St. Helens Corporation Act, 1893.

The St. Helens Corporation Act, 1898.

The St. Helens Corporation Act, 1911.

The St. Helens Corporation Act, 1921.

The Ministry of Health Provisional Orders Confirmation (No. 2) Act, 1926 ; confirming the St. Helens Order, 1926, as to Tuberculosis.

The Ministry of Health Provisional Orders Confirmation (No. 1) Act, 1928, repealing and altering certain sections of the St. Helens Improvement Act, 1869, and the St. Helens Corporation Acts, 1893, 1898, 1911, and 1921 with reference to New Streets and Buildings.

BYELAWS.

Byelaws as to Nuisances, confirmed by the Home Office, 11th May, 1870.

Byelaws as to Slaughterhouses, made by the Council on the 5th February, 1930.

Byelaws with respect to New Streets and Buildings in the Borough of St. Helens, made by the Council on the 5th October, 1927.

Byelaws with respect to the Drainage of Existing Buildings in the Borough of St. Helens made by the Council on 7th December, 1927.

Byelaws with respect to Tents, Vans, Sheds and similar structures used for human habitation made by the Council on the 28th July, 1926.

Byelaws with respect to Common Lodging Houses, made by the Council on the 2nd May, 1894.

Byelaws with respect to Houses let in Lodgings, made by the Council on the 2nd May, 1894.

Byelaws with respect to Female Domestic Servants' Registries, made by the Council on the 1st December, 1909.

Byelaws with respect to the Supply of Water, made by the Council on the 6th June, 1900.

Byelaws with respect to Cisterns, Waterclosets and Urinals, made by the Council on the 1st February, 1922.

Byelaws as to Spitting, made on the 2nd August, 1911.

REGULATIONS.

Regulations as to Public Abattoir and Cold Air Stores, made by the Council on the 2nd May, 1906.

The Borough of St. Helens (Notification of Measles, German Measles and Whooping Cough) Regulations, 1915, made by the Minister of Health on the 22nd June, 1915.

ORDERS—SHOP ACTS.

General Weekly Half-Holiday Order, made on the 7th August, 1912.

Weekly Half-Holiday Extension Order (Butchers and Chemists) made on the 4th December, 1912.

Closing Order (Motor, Cycle and Aircraft dealers) confirmed by the Home Secretary on the 30th January, 1913.

Closing Order (Tailors, etc. Shops) confirmed by the Home Secretary on the 10th December, 1915.

XI.—INSPECTION AND SUPERVISION OF FOOD.

MEAT AND OTHER FOOD.—There is a municipal abattoir with cold stores attached. Slaughtermen are licensed by the Corporation, and all animals killed are inspected by a qualified meat inspector.

There are two private slaughterhouses in the borough licensed for the slaughter of pigs only. 107 visits of inspection were made to these slaughterhouses during the year.

The inspection of meat and other foods is regularly carried out by the sanitary staff, and for this purpose 1300 visits were made to shops, stalls and vehicles, and places where food is prepared.

The following are the quantities of various classes of food-stuffs which were destroyed during the year by the department owing to being diseased or unsound :—

Meat	...	...	...	...	...	...	84,412 lbs.
Fish	...	...	...	...	...	...	4,144 ,,
Poultry, Game and Rabbits	...	...					14 ,,
Potatoes	...	...	...	...	...		6,720 ,,

Table 31 shows the number of animals slaughtered and the approximate weight in pounds of meat found diseased.

Table 31.

Number of Animals slaughtered and amount of diseased meat condemned during the year 1929.

						PRIVATE				
ABATTOIR.						SLAUGHTERHOUSES.				
			Number of Animals Slaugh- tered.	No. of Animals found diseased		Weight in lbs. of Meat Con- demned	Number of Animals Slaugh- tered.	No. of Animals found diseased		Weight in lbs. of Meat Con- demned
				Tuber- culosis	Other diseases.			Tuber- culosis	Other diseases.	
Beasts	.....	.....	4560	881	1019	7500	—	—	—	—
Calves	.....	.....	405	—	5	322	—	—	—	—
Sheep	.....	.....	2925	—	18	79	—	—	—	—
Pigs	.....	.....	6250	1111	185	8088	2502	55	33	923

Sale of Food Order 1921.—*Labelling of Imported Meat.*—No infringements of the above Order were found during the year.

Public Health (Meat) Regulations 1924.—No infringements of the above Regulations were found during the year.

Agriculture Produce (Grading and Marking) Act, 1928.—This Act provides for the marking of preserved eggs and for the registration of any premises used by way of trade for the cold storage or chemical storage of eggs.

There are no premises registered for this purpose in St. Helens and no infringements of the Act were found during the year.

Merchandise Marks Act, 1926.—The following Orders which have so far been made under the Merchandise Marks Act, 1926, in regard to foodstuffs are :—

Order.	Relating to
The Merchandise Marks (Imported Goods) No. 3 Order, 1928 ...	Honey. Fresh Apples.
The Merchandise Marks (Imported Goods) No. 5 Order, 1928 ...	Currants, Sultanas, Raisins. Eggs in Shell. Dried Eggs. Oat Products.
The Merchandise Marks (Imported Goods) No. 4 Order, 1929 ...	Raw Tomatoes.

Infringements of the Order relating to honey and fresh apples were found during the year and warnings were given in each case.

The Order relating to raw tomatoes does not come into force until 17th March, 1930.

MILK SUPPLY.—At the close of the year there were registered under the Milk and Dairies (Amendment) Act, 1922, and the Milk and Dairies Order, 1926 :—

- 9 persons as cowkeepers and wholesale and retail purveyors of milk ;
- 1 person as a cowkeeper and wholesale purveyor of milk ;
- 11 persons as cowkeepers and retail purveyors of milk ;
- 199 persons as purveyors of milk ; and
- 91 premises as cowsheds or dairies.

A total of 913 inspections were paid by the sanitary inspectors to the cowsheds, dairies and milkshops during the year. Approximately 230 cows are kept for dairy purposes within the borough, and these were regularly inspected by the veterinary inspector.

During the year a complete sanitary survey has been made of all dairy farms within the borough and, as a result of such survey, it was found that many required further structural alterations and improvements in respect of lighting, ventilation, drainage, construction of floors, and the provision of suitable dairies to bring them up to a standard of fitness to comply with the provisions of the Milk and Dairies Order 1926.

The owners were approached and in nearly every case consented to carry out the necessary alterations and improvements at once. It was not practicable, however, to re-construct the floors and manure channels of cowsheds during the winter months and this to some extent delayed the completion of the work. During the current year, however, practically all the most serious defects have been remedied.

Special efforts were also made during the year to increase the standard of cleanliness of dairy farms and to educate the dairymen in the production of clean milk. It has not generally been recognised by the local dairymen in the past that lack of attention to detail in cleanliness, e.g., a dirty milking stool, dirty hands, etc., which appear to them to be relatively unimportant, may be the cause of a high bacterial content in milk, resulting in early souring. A considerable number of warning letters were sent respecting the dirty condition of cowshed floors, dirty flanks and udders of cows, and the dirty condition of milking stools.

In regard to other classes of dairy premises in the borough, further improvements are still necessary before they can be regarded as entirely satisfactory. A complete survey of these premises is also being undertaken with a view to bringing them up to the required standard.

Every dairy should have two separate compartments, one for the cleansing of milk vessels and utensils, and the other for the storage of milk. The dairy should be well lighted and ventilated and be provided with an adequate supply of water and a sterilising outfit. Very few of the dairies in the borough at the present time reach this standard.

The old method of scalding milk vessels is still carried out by the majority of dairymen, but at its best it cannot approach in efficiency the careful use of steam. Steam sterilising outfits can be provided at comparatively little cost by utilising a gas or furnace copper, and an endeavour will be made during the current year to get more of these outfits into use.

A prejudice of dairymen which had to be overcome during the year was that of keeping milk in uncovered receptacles, under the impression that ventilation is required. This is not the case. The keeping quality of milk is improved if kept in covered unventilated receptacles.

One licence was granted during the year under the Milk (Special Designations) Order, 1923, for the purpose of selling certified milk.

Milk and Dairies Order, 1926.—The following contraventions of the Milk and Dairies Order, 1926, were found during the year. Warnings were given in each case :—

1. Churns in which milk had been delivered, returned to the sender without being thoroughly cleansed before leaving the custody or control of the dairyman.
2. Defective lids of churns allowing access to the milk of dirt, dust or rain water, or the return to the interior of the churn of any milk which may have been splashed above the lid.
3. Vessels containing milk in the dairy not properly covered, or the milk otherwise effectively protected against contamination.
4. Dogs being kept in dairy.
5. Filthy condition of milking stools.
6. Filthy condition of cowshed floors.
7. Filthy condition of cowshed ceilings.
8. Filthy condition of the dairy and wash-house.
9. Milk not removed as soon as possible from cowsheds after milking.
10. Transferring milk from one receptacle to another on the Railway Station.

11. Persons carrying on the trade of cowkeeper or dairyman on premises used as a dairy without being registered with the Sanitary Authority.
12. Flanks and udders of cows not thoroughly cleansed before milking.
13. Dung and offensive matter so placed as to render uncleanly the access to the cowshed.
14. Poultry being kept in the cowsheds.
15. Churns, vessels or other receptacles not marked with the name and address of the owners.
16. Interior of vehicles used for the conveyance of milk not kept in a cleanly condition.
17. Receptacles used for the conveyance of skimmed or separated milk not being marked with the words "Skimmed Milk" or "Separated Milk."

BACTERIOLOGICAL EXAMINATION OF MILK.—

During 1929, the systematic examination of milk for tubercle was carried out for the first time and 50 samples of milk were sent to the University Laboratory, Liverpool, for guinea pig inoculation tests.

In 4 cases the guinea pig died too soon after inoculation for a definite diagnosis to be made. Of the remaining samples, 3, or 6·5% were found to shew positive evidence of tubercular infection. This percentage is a very high one, and shews the need for the constant supervision of milk supplies bacteriologically as well as chemically.

The following action was taken in respect of the 3 samples shewing positive evidence of tubercle bacilli : —

Sample No. 998 was taken from the dairy premises of a cowkeeper in the borough. One cow was slaughtered under the Tuberculosis Order, 1925, and upon post mortem examination was found to be affected with the disease in an advanced form. Another cow died before it could be dealt with, and was also found to be affected with advanced tuberculosis upon post mortem examination. Further samples were taken and found to give negative results.

Sample No. 1097 was taken in course of delivery at the dairy premises of a local dairyman. The milk was produced in Cheshire and the County Medical Officer was notified in accordance with Section 4 of the Milk and Dairies (Consolidation) Act, 1915. As a result 3 cows were slaughtered under the Tuberculosis Order. A further sample was taken and found to give a negative result.

Sample No. 1115 was taken from the dairy premises of a cowkeeper in the borough. One cow was slaughtered under the Tuberculosis Order, 1925, and upon post mortem examination was found to be affected with the disease in an advanced form. Further samples were taken and found to give negative results.

FOOD AND DRUGS (ADULTERATION) ACT, 1928, etc.—Food and Drugs (Adulteration) Act, 1928.—During the year, 234 formal samples and 110 informal samples were taken for analysis.

The natures of the samples taken, with the results of examination by the Public Analyst, are shown in Table 32.

Table 32.

Number of samples taken under the Food and Drugs (Adulteration) Act, 1928, during 1929, and results of analysis by the Public Analyst.

ARTICLE	Number of Samples Taken		Number Genuine		Number Adulterated	
	Formal	Informal	Formal	Informal	Formal	Informal
Milk	215	37	188	34	27	3
Cream	1	3	1	3	—	—
Condensed Full Cream Unsweetened Milk }	5	3	5	2	—	1
Condensed Machine Skimmed Sweetened Milk }	6	21	2	16	4	5
Condensed Full Cream Sweetened Milk }	2	1	2	—	—	1
Butter	3	2	3	2	—	—
Margarine	—	2	—	2	—	—
Lard	—	3	—	3	—	—
Cheese.....	—	1	—	1	—	—
Coffee	—	3	—	3	—	—
Cocoa	—	2	—	2	—	—
Sugar	—	1	—	1	—	—
Sausages	—	6	—	6	—	—
Jam	—	2	—	2	—	—
Tripe	2	—	2	—	—	—
Self Raising Flour	—	1	—	1	—	—
Lentils.....	—	1	—	1	—	—
Fruit Salad	—	1	—	1	—	—
Peaches	—	1	—	1	—	—
Pineapple Cubes	—	1	—	1	—	—
Lemon Cheese	—	1	—	1	—	—
Cream Cake	—	1	—	1	—	—
Egg Sub. Powder	—	1	—	1	—	—
Arrowroot	—	1	—	1	—	—
Baking Powder	—	1	—	1	—	—
Borax	—	1	—	1	—	—
Ammon. Tinct. Quinine	—	1	—	1	—	—
Castor Oil	—	1	—	1	—	—
Cod Liver Oil	—	1	—	1	—	—
Tartaric Acid	—	1	—	1	—	—
Ground White Pepper	—	1	—	—	—	1
Tinned Peas	—	1	—	1	—	—
Garden Peas	—	1	—	1	—	—
Crab & Lobster Paste	—	1	—	1	—	—
Bloater Paste	—	1	—	1	—	—
Turkey & Tongue Paste	—	1	—	1	—	—
Malt Vinegar	—	1	—	1	—	—
Steak & Kidney Pie	—	1	—	1	—	—
Total	234	110	203	99	31	11

The appended statement shows the actions taken in the case of adulterated samples taken formally :—

(a) Legal proceedings instituted under the Food and Drugs (Adulteration) Act, 1928, and the Public Health (Condensed Milk) Regulations, 1923 and 1927.

Sample No.	Article.	Adulteration.	Result of Proceedings.
815	Milk	8% short of fat	Fined £1. £2/6/10 costs.
875	do.	11% short of fat	Case dismissed.
893	do.	12% short of fat	do.
921	do.	7% added water	Fined £2. £1/11/6 costs.
922	do.	7% short of fat	Case dismissed.
936	do.	5% added water	do.
1001	do.	2% added water	do.
971	Condensed Machine Skimmed Milk	23·5% total milk solids	do.
1017	do.	23·94% total milk solids	do.
1018	do.	24·48% total milk solids	do.

(b) No legal proceedings instituted :—

Sample 769.	Milk	...	2% added water. Warned by the Committee.
„ 780.	„	...	3% added water. Warned by the Committee.
„ 795.	„	...	4% added water. Warned by the Committee.
„ 798.	„	...	2% added water. Warned by the Committee.
„ 799.	„	...	2% added water. Warned by the Committee.

Sample 806.	Milk.	...	2% added water. Warned by the Committee.	
„ 807.	„	...	2% added water. Warned by the Committee.	
„ 302.	„	...	3% added water. Warned by the Committee.	} “Appeal to cow samples”
„ 303.	„	...	2% added water. Warned by the Committee.	
„ 818.	„	...	7% deficient in milk fat. 3% added water. Warned by the Committee.	
„ 819.	„	...	7% deficient in milk fat. 4% added water. Warned by the Committee.	
„ 2193.	„	...	7% deficient in milk fat. Warned by the Committee.	} “Appeal to cow sample”
„ 883.	„	...	1½% added water. Warned by the Committee.	
„ 947.	„	...	4% added water. Warned by the Committee.	
„ 948.	„	...	3% added water. Warned by the Committee.	
„ 1055.	„	...	7% deficient in milk fat. Warned by the Committee.	
„ 1056.	„	...	3% deficient in milk fat. Warned by the Committee.	

Sample 1060.	Milk	...	13% deficient in milk fat. Warned by the Committee.	} "Appeal to cow samples"
„ 1061.	„	...	11% deficient in milk fat. Warned by the Committee.	
„ 957.	Condensed Machine Skimmed Sweetened Milk.		Deficient in milk solids. Warned by the Committee.	

In addition to the above, in 18 cases the Analyst reported that the samples of milk were slightly deficient in non-fatty solids but not sufficient to certify adulteration.

It will be seen that a considerable portion of the milk supply of the borough is still below the standard prescribed by the Sale of Milk Regulations, 1901. These Regulations provide that a sample of milk containing less than 3% of milk fat or less than 8.5% of solids other than fat is to be presumed for the purposes of the Food and Drugs (Adulteration) Act, 1928, not to be genuine until the contrary is proved.

These limits are, however, substantially lower than the average percentages of genuine milk. It is known that, apart from actual adulteration, there is a number of factors affecting the composition of milk, and it is the opinion of competent observers that so far as the percentage of milk fat is concerned, the intervals between milkings constitute the most important of these factors. It will be noticed that in the case of the two "appeal to cow" samples Nod. 1060 and 1061 the deficiencies in fat were 13% and 11% respectively. From enquiries made it would appear that these deficiencies were directly attributable to the unequal lengths of the periods between the milkings.

I feel very strongly, therefore, that it is the duty of every milk producer to avoid as far as possible every abnormal circumstance affecting the quality of milk.

Examination of Milk for Dirt.—Six samples of milk were taken and examined for the presence of dirt.

Of this number 5 were found to be clean, and one was found to contain 10 parts by volume per 100,000 parts of milk. The sediment consisted mainly of husk, fibre, and dung. A warning letter was sent.

Fertilisers and Feeding Stuffs Act, 1926.—19 samples of fertilisers and feeding stuffs were taken under the above Act during 1929.

4 informal samples were found upon analysis to be not genuine. Further samples were taken and found to be genuine.

7 infringements of the Act in respect of labelling were dealt with by verbal notices.

Public Health (Preservatives in Food) Regulations.—The whole of the articles of food which were sampled under the Food and Drugs (Adulteration) Act, 1928, were found to comply with the Public Health (Preservatives, etc., in Food) Regulations.

The Public Health (Condensed Milk) Regulations, 1923 and 1927.—38 samples of condensed milk were purchased under the above Regulations during the year.

4 formal samples and 5 informal samples of condensed machine skimmed sweetened milk of foreign manufacture were found to be below the standard set by the Regulations, viz. :— 26% total milk solids. Of the four formal samples, legal proceedings were instituted in three cases, one of which was dismissed by the Court, in the fourth sample, the vendor was warned.

No infringements of the Regulations in respect of labelling were found during the year.

These samples are included in Table 32.

The Public Health (Dried Milk) Regulations, 1923 and 1927.— No infringements of the above Regulations were found during 1929.

Artificial Cream Act, 1929.—This Act provides that where any substance, purporting to be cream or artificial cream, is artificial cream, it shall not be sold under a description including the word “cream” unless that word is preceded by the word “artificial.” The Act also provides that with certain specified exceptions, premises where artificial cream is manufactured or sold must be registered with the Local Authority.

No premises are registered for this purpose in St. Helens and no infringements were found during the year.

DISEASES OF ANIMALS ACTS.—Tuberculosis Order, 1925.—During the year, seven cattle were dealt with under the Tuberculosis Order, 1925. Of these, four were notified by private veterinary surgeons and three by the Corporation’s chief sanitary inspector. One animal died before it could be examined by the veterinary inspector, one animal was found not to be suffering from tuberculosis, and slaughter was carried out in the other cases by the Council. Evidence of tuberculosis was found on post mortem examination. The total compensation paid to owners was £11/10/- and the net salvage was 6/10d.

The following statement shows the descriptions of the animals dealt with, the form of the suspected disease and the classification of the stage of the disease as revealed at the post mortem examination :—

Description	Form of the suspected disease	Classification at post mortem examination
Cow in milk	Tuberculosis of the udder, chronic	Advanced
do.	cough, etc.	do.
do.	Chronic cough, etc.	No post mortem examination
	Tuberculosis emaciation	Advanced
do.	do. do.	do.
do.	Chronic Cough, etc.	do.
do.	Tuberculosis emaciation	do.
do.	Giving Tuberculous milk	No post mortem examination

Anthrax.—5 cases of suspected Anthrax were reported during the year. Of these 2 were confirmed by the Ministry of Agriculture.

The carcasses were disposed of and the premises disinfected in accordance with the Anthrax Order.

Swine Fever.—25 cases of suspected Swine Fever were reported during the year. Of these one was confirmed by the Ministry of Agriculture.

The carcasses were disposed of and the premises disinfected in accordance with the Swine Fever Order.

Parasitic Mange.—1 case of Parasitic Mange was reported during the year. Cleansing and disinfection were carried out in accordance with the Parasitic Mange Order.

BAKEHOUSES.—There are 76 bakehouses on the Register, one of which is underground. Mechanical power is used in 24 instances.

269 visits of inspection were made during the year and 9 sanitary defects were found and remedied after notice being given.

XII.—SANITARY CIRCUMSTANCES OF THE AREA.

WATER.—The water supply is from deep wells and boreholes in new red sandstone at Eccleston Hill, Whiston, Knowsley, Kirby, and Melling, supplemented by a supply from the Liverpool Corporation Rivington Main, and water from coal measures at Collins Green.

The water is of a high degree of purity, though hard. The total hardness is reduced from 22·6 degrees to 10·5 by a softening process before distribution.

RIVERS AND STREAMS.—The position outlined under this heading in my last report is substantially unchanged, although, as the erection of new buildings proceeds, the serious pollution of rivers and streams by sewage is bound to be intensified. For instance, in addition to the four points at which I stated in my report for 1927 that serious sewage pollutions were taking place, I must now add the increased pollution of the Rainford Brook due to the sewage from upwards of 200 additional houses erected on the Haresfinch site. Before the erection of these houses, the old culvert which drains the Haresfinch area and which discharges into the Rainford Brook at Cowley Hill Glass Works, only conveyed comparatively small volumes of sewage, but now it is called upon to convey the whole of the sewage from the Haresfinch Housing Estate.

CLOSET ACCOMMODATION.—During the year, 121 privy middens and 103 tub and pail closets were converted to the water carriage system. It is estimated that there are still 554 houses with privy middens and 410 houses with tub and pail closets, and there are in addition 88 pail closets and one privy midden at various schools and works.

Table 33 shows the number of conversions completed each year since 1904.

Table 33.

The number of conversions to the water carriage system completed each year since 1904.

Year	Privies	Tub and pail closets	Total
1904	69	67	136
1905	80	64	144
1906	47	19	66
1907	237	125	362
1908	243	24	267
1909	106	38	144
1910	179	33	212
1911	270	129	399
1912	301	691	992
1913	460	646	1,106
1914	691	976	1,667
1915	300	380	680
1916	57	112	169
1917	45	103	148
1918	18	21	39
1919	148	142	290
1920	284	369	653
1921	75	198	273
1922	45	350	395
1923	132	367	499
1924	160	685	845
1925	82	278	360
1926	39	238	277
1927	69	264	333
1928	219	229	448
1929	121	103	224

As many of the closets to be converted are in areas which may be dealt with under the new Housing Act, and the conversion of others is awaiting the provision of new or more suitable sewers, there is now necessarily a slowing up in the conversion scheme. It is hoped, however, that these two main obstacles will be overcome in the near future.

SCAVENGING.—The removal and disposal of house refuse is carried out by the Borough Engineer's Department. There are no refuse disposal works for dealing with refuse, and the majority is tipped at Parr Depot.

SANITARY INSPECTION OF THE AREA.—The total number of visits paid by sanitary inspectors during the year was 17,955. The nature of these inspections is shown in Table 34, and

Table 35 contains a list of the notices served and the results of such notices.

Table 34.

Number and nature of inspections during 1929.

Dwelling Houses inspected	.....	.....	.....	.....	.....	.....	.....	2,323
Common Lodging Houses	.....	.....	.....	.....	.....	.....	.....	116
Houses-let-in-lodgings	.....	.....	.....	.....	.....	.....	.....	29
Common yards, back roads and passages	.....	.....	.....	.....	.....	.....	.....	401
Horse manure middensteads	.....	.....	.....	.....	.....	.....	.....	204
Fried Fish Shops	.....	.....	.....	.....	.....	.....	.....	36
Fishmongers and Greengrocers	.....	.....	.....	.....	.....	.....	.....	225
Butchers' Shops	.....	.....	.....	.....	.....	.....	.....	729
Ice Cream Shops	.....	.....	.....	.....	.....	.....	.....	41
Factories and Workshops	.....	.....	.....	.....	.....	.....	.....	652
Bakehouses	.....	.....	.....	.....	.....	.....	.....	269
Offensive Trades	.....	.....	.....	.....	.....	.....	.....	136
Private Slaughterhouses	.....	.....	.....	.....	.....	.....	.....	107
Theatres and Cinemas	.....	.....	.....	.....	.....	.....	.....	136
Tents, vans and sheds	.....	.....	.....	.....	.....	.....	.....	170
Testing of drains :—								
by smoke	.....	.....	.....	.....	.....	.....	.....	16
by water	.....	.....	.....	.....	.....	.....	.....	123
by coloured water	.....	.....	.....	.....	.....	.....	.....	30
by breaking down	.....	.....	.....	.....	.....	.....	.....	24
Receptacles for ashes	.....	.....	.....	.....	.....	.....	.....	430
Dairies, cowsheds and milkshops	.....	.....	.....	.....	.....	.....	.....	913
Samples of milk and other foods procured for :—								
Chemical analysis	.....	.....	.....	.....	.....	.....	.....	344
Bacteriological examination	.....	.....	.....	.....	.....	.....	.....	50
Bacterial content	.....	.....	.....	.....	.....	.....	.....	—
Sediment	.....	.....	.....	.....	.....	.....	.....	6
Rag Flock Acts	.....	.....	.....	.....	.....	.....	.....	11
Fertilizers and Feeding Stuffs Act	.....	.....	.....	.....	.....	.....	.....	17
Samples of water procured	.....	.....	.....	.....	.....	.....	.....	4
Insufficient water supply	.....	.....	.....	.....	.....	.....	.....	19
Smoke observations	.....	.....	.....	.....	.....	.....	.....	174
Sanitary accommodation in shops	.....	.....	.....	.....	.....	.....	.....	168
Visits to Glassworks (straw sterilization)	.....	.....	.....	.....	.....	.....	.....	115
Enquiries re Brokers' Licenses	.....	.....	.....	.....	.....	.....	.....	7
Visits to work in progress (P.H. Acts, Housing Acts, Conversions, etc.)	.....	.....	.....	.....	.....	.....	.....	9,124
Miscellaneous visits	.....	.....	.....	.....	.....	.....	.....	806
Total								<u>17,955</u>

During the year, 587 complaints of choked drains were made to the Department. Of this number 410 drains were freed from obstruction by members of the staff of the sanitary department, thus obviating the necessity for serving notices upon the owners. The policy of the department in freeing choked drains whenever possible is the means of saving property owners a very considerable amount of worry and expense.

Sanitary Defects—Number of notices served during 1929,
and results.

Subject of Notice	Preliminary Notices	Statutory Notices	Number complied with	Number outstanding at end of year
Ditches requiring cleansing	3	—	3	—
Defective drains	72	36	72	—
Choked drains	174	—	170	4
Insufficient closet accommodation	30	10	18	12
Absence of proper sink	51	24	45	6
Defective water closets	137	47	131	6
Defective pail closets	1	1	1	—
Defective privy middens	1	1	1	—
Defective gullies and dishstones	24	10	23	1
Defective sink waste pipes	152	81	145	7
Defective w.c. cisterns and flushing fittings	189	115	183	6
Defective urinals	1	—	1	—
Defective soil pipes	20	7	20	—
Sink waste pipes connected with drains	—	—	—	—
Yards and passages unpaved	16	2	12	4
Defective yard paving	108	95	101	7
Dampness arising from :—				
Defective roofs	380	280	360	20
„ eavesgutters	266	230	248	18
„ downspouts	155	103	139	16
„ pointing	136	107	126	10
Insufficient ventilation of rooms	38	19	37	1
Insufficient water supply	23	17	19	4
Defective manure midden-steads	2	—	2	—
Dwelling-houses to be whitewashed	4	4	4	—
Defective chimney flues	25	8	25	—
Defective ashpits	368	314	298	70
Absence of ashpit accommodation	42	28	40	2
Disused ashpits abolished	20	20	20	—
Defective window sash frames and sashcords	293	245	265	28
Defective floors	179	93	159	20
Defective stairs	36	15	31	5
Defective plaster of walls and ceilings	341	235	314	27
Defective fireplaces	104	67	90	14
Defective washboilers	69	32	65	4
Defective doors, cupboards, etc.	114	74	106	8
Defective gas pipes and fittings	27	9	24	3
Defective water pipes and fittings	3	—	3	—
Defective yard division walls	54	17	51	3
Dangerous and defective chimney stacks	39	17	36	3
Fractured internal walls	23	19	23	—
Defective and bulging external walls	119	92	110	9
Filthy condition of premises	13	3	13	—
Accumulation of manure or offensive matter	7	4	7	—
Keeping of animals, &c.	12	10	10	2
To abate overcrowding of dwelling-houses	1	1	1	—
Miscellaneous	193	96	170	23
Contraventions of Factory and Workshops Acts	17	17	6	11
Bakehouses	9	1	9	—
Contraventions of Bylaws of :—				
Common Lodging Houses	4	4	4	—
Houses-let-in-Lodgings	5	5	5	—
Tents, Vans, Sheds, etc.	8	6	8	—
	4108	2621	3754	354

SMOKE ABATEMENT.—With the object of ascertaining whether or not the adoption of the Model Byelaws relating to the emission of black smoke is necessary, a series of smoke observations were taken during the year. The observations extended over a period of six weeks from August 12th to September 23rd, and three observations were taken of each chimney the industry of which was found to be actually working during that period. It was not found possible to take observations of every industrial chimney in the borough, owing to the fact that a considerable number of factories were either temporarily closed or were not working full time.

The chief provision of the byelaws is that when there is emission of black smoke during or in excess of a stated number of minutes (usually 2 minutes) within any continuous period of half an hour, it is presumed to be a nuisance until the contrary is proved. The advantage to be derived from the adoption of this byelaw is that a definite standard is set up. If the standard is exceeded the onus of proof that a nuisance has not been committed will be upon the persons charged. If there is no such byelaw, the onus of proving the existence of a nuisance rests upon the local authority.

During the period stated three observations each of 42 industrial chimneys were taken, a total of 126 observations being recorded. For 17 observations the chimney was found to be not under working conditions. Of the remaining observations, in 75 the emission of black smoke was in excess of the standard set up by the Model Byelaws; in 19 no black smoke was emitted during the period of observation; and in 15 the amount of black smoke was within the standard. The observations showed black smoke during periods ranging from a minimum of 0 minutes to a maximum of 30 minutes during the half hour. The average emission of black smoke for each observation was 6·06 minutes.

It can, therefore, be taken that the total emission of black smoke from industrial chimneys in St. Helens is about three times in excess of what it should normally be. It should be noted, how-

ever, that many of the industries in the borough are not working to capacity at the present time and, consequently, when normal trade conditions are restored the ill effects arising from the excessive emission of black smoke will be very much accentuated.

Apart from the question of atmospheric pollution with its attendant damage to public health, the emission of black smoke means considerable waste of fuel so that both on public health and economic grounds the adoption of the byelaws is to be strongly recommended.

The following gives a summary of the observations taken:—

No. of industrial chimneys of which observations were taken	42
No. of observations of each chimney	3
Total No. of observations taken	126
Period of observation	30 mins.
No. of observations showing an emission of black smoke of 2 minutes and over, within a continuous period of half an hour	75
No. of observations showing an emission of black smoke under 2 minutes, within a continuous period of half an hour	15
No. of observations showing no emission of black smoke within the half hour.....	19
No. of observations where the chimney was found to be not under working conditions	17
Longest period of emission of black smoke within the half hour	30 mins.

Shortest period of emission of black smoke within the
half hour 0 mins.

Average emission of black smoke for each observation ... 6·06 mins.

FACTORIES AND WORKSHOPS.—(a) Factories—One defect remediable under the Public Health Acts was reported by H.M. Inspector of Factories and it was complied with during the year.

(b) Workshops—The number of workshops registered is 138 and Table 36 shows the classes of such workshops.

Table 36.

Registered workshops.

Workshops on the Register (s. 131) at the end of the year.	Number
Dressmakers and mantle making	5
Milliners	10
Tailors.....	15
Hosiery Knitters	1
Joiners, builders, cabinet-makers and plumbers, etc.	18
Blacksmiths, wheelwrights, coach builders and masons	10
Weighing machine repairers.....	1
Cloggers and boot repairers	45
Cycle Makers	4
Tripe Dressers	2
Herbal Brewers	2
Seltzogene charge maker	1
Cab washing	2
Saddler	1
Sundries	16
Ice Cream Makers	5
Total Number of Workshops on Register	138

(c) Outworkers—No lists of outworkers were received from employers during the year.

Table 37 gives particulars of the administrative action taken under the Factory and Workshop Act, 1901.

Table 37.

Factories, Workshops and Workplaces.

1.—Inspection of Factories, Workshops, and Workplaces, including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises (1)	Number of		
	Inspections (2)	Written Notices (3)	Occupiers Prosecuted (4)
Factories (including Factory Laundries)	176	4	—
Workshops (including Workshop Laundries)	415	13	—
Workplaces (other than Outworkers' premises)	61	—	—
Totals	652	17	—

2.—Defects found in Factories, Workshops and Workplaces.

Particulars. (1)	Number of Defects.			Number of offences in respect to which Prosecutions were instituted. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts—*</i>				
Want of cleanliness	13	5	—	—
Other nuisances.....	2	—	—	—
Sanitary accommodation—				
insufficient	1	—	—	—
unsuitable or defective	1	1	—	—
not separate for sexes	—	—	—	—
Offences under the Factory and Workshop Acts	—	—	—	—
Totals	17	6	—	—

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

3.—Outwork in unwholesome premises, Section 108—Nil.

PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYELAWS OR REGULATIONS.—Offensive Trades.—There are 5 offensive trades in the borough, consisting of 4 tripe boilers and 1 gutscraper.

There are no byelaws in force in the borough for the regulation of offensive trades, and I am of opinion that the question of their adoption should be considered in the immediate future.

I am also of opinion that the powers conferred by Section 51 of the Public Health Acts (Amendment) Act, 1907, by which a Local Authority may declare “certain other trades, businesses or manufactories” to be offensive trades should be utilised in order to include Rag and Bone Dealers and Fried Fish Shops. The sanitary condition of these latter premises at the present time cannot be considered to be satisfactory and extended powers are required if supervision is to be effective.

During the year 136 visits were paid to premises of this nature.

Tents, Vans, Sheds, etc.—The number of vans used for human habitation continues to be considerable in spite of the operation of the byelaws. Many of these vans are badly constructed, and in a number of instances the rentals charged are altogether out of proportion to the accommodation afforded. During the year 170 inspections of vans were made, and in 8 instances notices were served upon the owners requiring their repair. In each case the notice was complied with. 3 vans were dealt with under the byelaws, resulting in their removal after legal proceedings had been instituted.

Houses-Let-in-Lodgings,—There are only 12 premises registered as houses let-in-lodgings, but there are others which are known to be used for the purpose but cannot be brought within the scope of the existing byelaws owing to their rateable values and rents being above the prescribed limits.

The present condition of these premises is not satisfactory. and it would appear that the provisions of the existing local byelaws which came into force in 1894 are not sufficient for their effective supervision and control.

I would, therefore, suggest that the adoption of new byelaws should be considered which would, in addition to the provisions of the existing byelaws, provide for :—

- (a.) A definite standard for lighting and ventilation.
- (b.) Adequate closet accommodation.
- (c.) Accommodation for washing clothes.
- (d.) Accommodation for the proper storage of food.
- (e.) Accommodation for the preparation and the cooking of food.
- (f.) A sufficient number of sinks.
- (g.) Adequate accommodation for the storage of house refuse.
- (h.) Adequate means of natural and artificial lighting for common staircases.
- (i.) Handrails for staircases.
- (j.) Means for prevention of and safety from fire.
- (k.) Separation of sexes.
- (l.) Separate approaches to each room or tenement.
- (m.) Provision of receptacles for filth and other refuse.

During the year 5 notices were served and complied with in respect of houses-let-in-lodgings.

Common Lodging Houses.—There are six common lodging houses registered for the accommodation of 264 lodgers. These premises were regularly inspected, 116 visits being paid ; and 4 notices were served and complied with.

OTHER SANITARY CONDITIONS.—Rats and Mice Destruction Act, 1919.—The duties of Rat Officer under the Rats and Mice Destruction Act, 1919, are now carried out by the Chief Sanitary Inspector.

National Rat Week was held from the 4th to the 9th November, 1929, and it was again decided to co-operate in St. Helens. 350 specially attractive posters were exhibited at the principal bill-posting stations in the borough and on public vehicles. Similar announcements were made in the local newspapers, and the loan of the Ministry of Agriculture's film "The Rat Menace" was obtained and exhibited at local cinemas. A large number of hand-bills were also printed and distributed detailing suitable methods of rat destruction.

In spite of the fact that greater publicity was given to the importance of rat destruction during National Rat Week in 1929 than in previous years, the response by the public to the appeal for co-operation does not appear to have been so great. This is accounted for by the fact that greater efforts have consistently been made by the Department throughout the year to secure the destruction of rats. Whenever a complaint of infestation of premises by rats has been made by a member of the public, the premises have been visited by a member of the staff and the cause of infestation discovered and removed. In a large number of cases the ingress of rats into a building is by means of defective drains, the rats making their way into the drains from the sewers. In all cases of rat infestation the drains are automatically tested and where necessary reconstructed, and this procedure has had the effect of reducing the number of complaints. The practice of laying poison baits indiscriminately is open to serious objections, and is at its best but a temporary expedient. The cause of infestation should whenever possible be discovered and removed.

Places of Public Entertainment.—These premises have been regularly inspected throughout the year and were generally found to be kept in a satisfactory condition.

As a result of representations made to the Licensing Justices a number of sanitary improvements were obtained.

During the year the Health Committee suggested to the Licensing Justices that the London County Council's standard of sanitary accommodation for places of public entertainment should be adopted in St. Helens. This standard is one which has been accepted by a number of other provincial Authorities and is generally regarded as being a reasonable one. It is to be regretted that the Licensing Justices have not seen their way to adopt it.

The standard, which is based on the assumption that the audience consists of equal numbers of males and females, is as follows for each floor or tier :—

FEMALES : W.C.'s.—1 for the first 100, 1 for the next 150,
1 for the next 250, and 1 for the next 400.
i.e.—2 for 250, 3 for 500 and 4 for 900.

MALES : W.C.'s.—1 for the first 150, 1 for the next 250,
1 for the next 400 and 1 for the next 400.
i.e.—2 for 400, 3 for 800 and 4 for 1,200.

„ URINALS—Dance Halls and Cinemas—1 for 100.
Music Halls—1 for 60.

(with frequent intervals).

Theatres, etc.—1 for 40.

(with drink licence).

Sanitary Accommodation in Shops.—During the year special attention has been paid to the question of the provision of separate sanitary conveniences in the case of shop premises where persons of both sexes are employed.

Action was taken in 30 cases. In 13 cases additional closets have been provided. In 5 cases other suitable arrangements have been made and in the remaining 12 cases the provision of additional closets is either actually in progress or the contractor has received instructions to carry out the work.

Canal Boats.—No canal boat was inspected during the year, and it would appear that for the time being the canal has fallen into disuse.

Mortuary.—A public mortuary with post-mortem room is maintained behind the Town Hall and is under the supervision of the Medical Officer of Health. During the year 38 bodies were received into the mortuary and 12 post-mortem examinations were conducted.

The Rag Flock Acts, 1911 & 1918.—Two samples of Rag Flock were taken during the year and were found to comply with the required standard of cleanliness.

XIII.—HOUSING.

Of the 495 houses erected during 1929, 435 were subsidy houses, and, of these, 340 were erected by the Local Authority and 95 by private or commercial enterprise.

Table 38 shows the number of dwelling houses erected in each ward since 1904.

Table 38.

The wards of the borough in which dwelling houses have been erected during the years mentioned.

Year	North Eccles- ton	South Eccles- ton	Central	North Windle	South Windle	Hard- shaw	East Sutton	West Sutton	Parr	Total
1904	105	53	7	37	18	47	59	1	70	397
1905	19	93	1	44	16	90	42	10	54	369
1906	11	51	—	31	13	31	73	24	39	273
1907	22	38	—	26	—	22	77	3	29	217
1908	2	52	—	4	2	27	22	—	20	129
1909	—	36	—	10	—	10	6	3	10	75
1910	2	31	—	10	—	24	18	—	25	110
1911	14	20	—	—	—	30	75	26	12	177
1912	35	28	—	4	—	26	28	58	1	180
1913	10	31	—	—	3	19	14	99	6	182
1914	10	42	—	9	16	14	20	63	29	203
1915	6	9	—	26	1	2	8	25	27	104
1916	—	12	—	1	1	2	4	16	16	52
1917	—	—	—	—	—	—	—	9	—	9
1918	—	—	—	—	—	—	—	3	—	3
1919	—	1	3	—	—	—	—	—	—	4
1920	—	—	—	—	—	—	—	—	—	—
1921	—	1	—	41	—	—	—	6	—	48
1922	—	1	—	164	—	—	—	—	—	165
1923	1	5	2	2	—	2	—	33	—	45
1924	2	24	—	25	—	—	2	45	5	103
1925	8	76	—	90	—	1	9	48	15	247
1926	19	172	—	106	16	4	19	63	51	450
1927	33	189	—	125	3	68	160	14	56	648
1928	12	116	3	237	5	2	97	13	335	820
1929	4	219	—	35	—	21	26	5	185	495

A statement as to the number of houses erected with and without State assistance, together with a summary of the work of the department in regard to housing, is given in Table 39.

Table 39.

Housing.

Number of new houses erected during the year :—

- (a) Total (including numbers given separately under (b)) 495
- (b) With State assistance under the Housing Acts :

(i) By the Local Authority 340

(ii) By private or commercial enterprise..... 95

1.—Inspection of Dwelling Houses during the year :—

1. Total number of dwelling houses inspected for housing defects under Public Health or Housing Acts 2,323
2. Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing (Consolidated) Regulations, 1925 210
3. Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 5
4. Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation 2,310

2.—Remedy of Defects during the year without service of formal notices :—

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their Officers 1,547

3.—Action under Statutory Powers during the year :—

A. Proceedings under Section 3 of the Housing Act, 1925 :—

1. Number of dwelling houses in respect of which notices were served requiring repairs 34
2. Number of dwelling houses which were rendered fit after service of formal notices :—
 - (a) By Owners 34
 - (b) By Local Authority in default of owners —

3. Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	—
4. Number of notices not served pending consideration as an improvement scheme	52

B. Proceedings under the Public Health Acts :—

1. Number of dwelling houses in respect of which notices were served requiring defects to be remedied	735
2. Number of dwelling houses in which defects were remedied after service of formal notices : —	
(a) By Owners	705
(b) By Local Authority in default of owners	—

C. Proceedings under Sections 11, 14 & 15 of the Housing Act, 1925 :—

1. Number of representations made with a view to the making of Closing Orders	5
2. Number of dwelling houses in respect of which Closing Orders were made	5
3. Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit.....	—
4. Number of dwelling houses in respect of which Demolition Orders were made	—
5. Number of dwelling houses demolished in pursuance of Demolition Orders	—

A marked feature of the work of the Department during 1929 has been the speeding up of the repair and reconditioning of existing insanitary property.

During the last three months of the year one inspector of the Department devoted practically the whole of his time to this work.

The procedure for dealing with insanitary property was also changed during the year. In the past it was the practice to serve notices requiring the remedying of defects under the Public Health Acts, but during the year it was decided to utilize the very much wider powers conferred by Section 3 of the Housing Act, 1925. A considerable number of defects commonly found in house property can be dealt with more readily under this Section and the Local Authority are also empowered to do the work in default. This policy has been so successful as to justify its further continuance.

As pointed out by the Ministry of Health, it is necessary to distinguish two different standards in regard to housing accommodation. There is what may be termed the standard of mere fitness which implies only that a house is free from serious defects. There is also a higher standard of amenity which implies that the house is not only free from these defects but has advantages and amenities which tend to promote to the full a healthy and contented home-life. It has been the policy of the Department whenever possible to obtain this higher standard.

Several schemes of improvement in connection with congested groups of houses were either completed or in progress at the end of the year. It is, however, extremely unfortunate that in a number of instances where owners have expressed a willingness to carry out improvements, the work has been delayed owing to the difficulty in finding alternative accommodation for families who would necessarily be displaced.

Serious overcrowding still exists in many houses in the borough and in many instances there is no proper accommodation for the separation of the sexes.